THE CAVALRY JOURNAL

PUBLISHED BI-MONTHLY BY THE UNITED STATES CAVALRY ASSOCIATION

VOLUME XLVIII
NUMBER 6

NOVEMBER-DECEMBER, 1939
WHOLE NUMBER 216

MAJOR CHARLES S. KILBURN, CAVALRY, EDITOR

CONTENTS

THE SEVENTH CAVALRY BRIGADE IN THE FIRST ARMY MANEUVERS 450
By Brigadier General Adna R. Chaffee

AN OBSERVER AT THE FIRST ARMY MANEUVERS 461
By Major T. J. Heavey, Cavalry

CAVALRY DIVISION MANEUVERS, OCTOBER, 1939 464
By Lt. Colonel E. E. Schwien, 8th Cavalry

THE GERMAN CAMPAIGN IN POLAND 469
By Lt. Colonel von Wedel, G.S.C., German Army

OPERATIONS OF A GERMAN ARMORED CAR PLATOON IN POLAND 475
By Lt. Colonel Truman Smith, Infantry

THE DIESEL ENGINE 477
By Arthur F. Ochtman

RUSSIAN CAVALRY 481

LITTLE PHIL — Part II 482
By Fletcher Pratt

CAVALRY DISPERSION 495

THE NINE TROOP REGIMENT 496

CORPS RECONNAISSANCE REGIMENT 498

AN EDITORIAL 500

SPECIAL ACTIVITIES:

Training "Over Their Heads" 503
By Captain Saul S. Dorfman, Cavalry Reserve

A Foxhunter Views the Olympic Try-Out 504
By An Elderly Foxhunter

Hearing Officers Think 506

Time to Wake Up 507

LETTERS TO THE EDITOR 510

EDITOR'S SADDLE 512

NOTES FROM THE CHIEF OF CAVALRY 514

GENERAL HAWKINS' NOTES 516

NOTES FROM THE CAVALRY BOARD 519

BOOK REVIEWS 520

ORGANIZATION ACTIVITIES 524

ROSTER OF REGULAR ARMY CAVALRY OFFICERS 537

INDEX, THE CAVALRY JOURNAL, VOLUME XLVIII, 1939 543

PUBLICATION DATE: DECEMBER 10, 1939

THE CAVALRY JOURNAL IS NOT RESPONSIBLE FOR OPINIONS EXPRESSED IN PUBLISHED CONTRIBUTIONS

Publication Offices: 1406 East Franklin Street, Richmond, Va.; Editorial Offices: 1624 H Street, N.W., Washington, D. C.
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Entered as Second Class Matter at Richmond, Virginia, under the act of March 3, 1879, for Mailing at Special Rate of Postage Provided in Section 412, Act of October 3, 1917. Terms: Domestic Subscriptions, individual and organization, $3.00 per year. Foreign, $3.50 per year. All subscriptions payable in advance. Single copies, 75c. Extra copies to subscribers, 50c. THE CAVALRY JOURNAL *does not* carry paid advertisements.

THE SEVENTH CAVALRY BRIGA

By Brigadier General Adna R. Chaffee

Commanding the Seventh Cavalry Brigade

As early as December, 1938, information was received to the effect that at least part of the Seventh Cavalry Brigade would engage in the First Army Maneuvers which were scheduled to take place during the month of August, 1939. Whether or not the Brigade would participate in its entirety was predicated upon the amount of funds which were to be made available.

Later on in the winter it was announced that the whole brigade would take part in the maneuvers and that the maneuver area would be in the vicinity of Plattsburg, New York, instead of at Pine Camp as planned originally.

As plans for the maneuvers progressed it was found that the funds allowed the First Army for gasoline and oil expenditures would be insufficient to permit the track and half-track vehicles of the Brigade to march overland to and from the maneuver area, but that an ample allotment for rail movements did exist. Therefore, it would be necessary to ship the above vehicles by rail.

During the first part of June two Brigade Staff Officers made a reconnaissance of the proposed route of march from Fort Knox to the maneuver area. En route the suitability of roads was determined, camp sites were selected and arrangements made for the purchase of supplies. While in the maneuver area the Brigade Commander, who had flown to Plattsburg, and these officers selected the camp site which the Brigade was to occupy during the maneuvers. Although the First Army Supply personnel were not present at Plattsburg so far in advance, it was found possible also to make preliminary contracts for gasoline and oil to be supplied during the maneuvers, and to make arrangements with the railroad authorities for the unloading of the track and half-track vehicles upon arrival at Plattsburg.

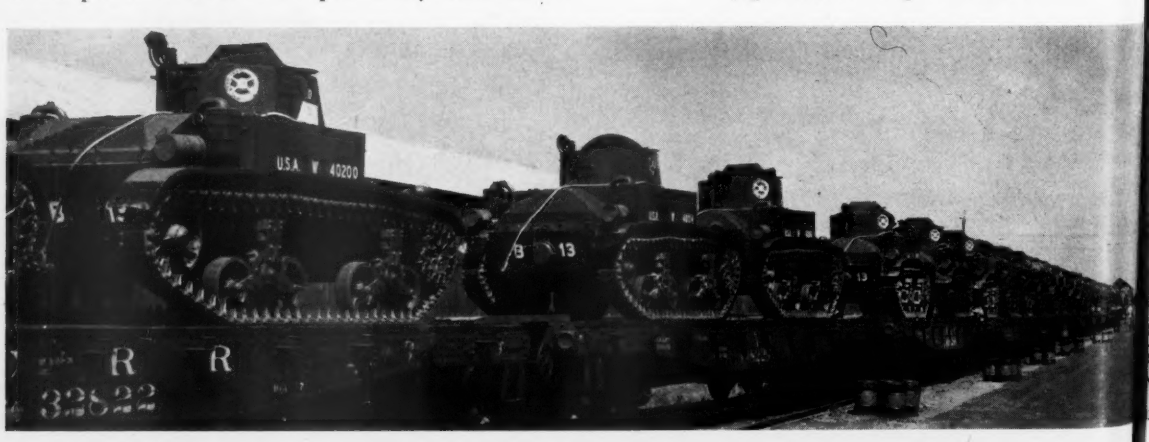
Since the railroad loading facilities at Fort Knox were inadequate for such a movement, it was decided to load all vehicles to be shipped in Louisville. Accordingly, on August 1st, 112 Combat Cars from both cavalry regiments, 21 half-track Machine Gun Personnel Carriers of the 1st Cavalry and 28 Half-track vehicles of the 68th Field Artillery with the eight 75-mm. Howitzers belonging to the two half-track batteries, were marched to Louisville and loaded for shipment on 77 flat cars.

The next day, August 2nd, the Brigade commenced its march overland to the Plattsburg Area with all of the wheeled vehicles, and with the personnel of its track and half-track vehicles carried in trucks. There was a total of 480 vehicles in the column; and the total distance of 1,010 miles was completed in six marches. The strength of the Brigade was approximately 2,300 officers and men. The following was the itinerary:

August 2nd—Fort Knox to Hamilton, Ohio—188 miles.

August 3rd—Hamilton, Ohio, to Ashland, Ohio—175 miles.

Combat cars as they arrived at Jeffersonville Depot, Indiana



THE FIRST ARMY MANEUVERS

Display and demonstration of 7th Cavalry Brigade for 1st Division

August 4th—Ashland, Ohio, to Erie, Pennsylvania —166 Miles.
August 5th—Erie, Pennsylvania—Layover.
August 6th—Erie, Pennsylvania, to Rochester, New York—164 miles.
August 7th—Rochester, New York, to Pine Camp, New York—172 miles.
August 8th—Pine Camp, New York, to Black Brook, New York—145 miles.

Terrain of the Maneuver Area

The Maneuver Area was a strip of land approximately 20 miles from east to west and 30 miles from north to south located west of Lake Champlain. The eastern portion along Lake Champlain was gently rolling country gradually sloping away and upward into the Adirondack Mountains to the west. The mountainous section which constituted about two-thirds of the area, was heavily forested and extremely rough and broken. Three more or less parallel river valleys—the Ausable, Salmon and Saranac ran east and west through the area. (See Sketch No. 1.) All in all this country, with its extremely limited amount of free maneuverable area, surrounded as it was by dominating mountains, and with its numerous rivers and lakes, constituted about as difficult a locality as could have been chosen for mechanized operations.

Units Participating

The following units participated in the 1st Army Maneuvers:

Provisional Blue Corps:
- 1st Division
- 18th Infantry Brigade
- 7th Cavalry Brigade:
  - Brigade Headquarters and Headquarters Troop
  - 1st Cavalry
  - 13th Cavalry
  - 68th Field Artillery
  - 12th Observation Squadron
  - 19th Ordnance Company, Maintenance
  - Co. E, 5th Quartermaster Regiment, Maintenance
  - Detachment Medical Corps
  - Co. E, 1st Engineer Regiment (attached for Maneuvers only).
- 97th Observation Squadron
- 2nd Battalion, 25th Field Artillery.

I Corps:
- 26th Division

43rd Division
II Corps:
27th Division
44th Division
Miscellaneous Army and Corps Troops:
101st Cavalry
101st Signal Battalion
197th Coast Artillery (AA)
212th Coast Artillery (AA)
Battalion 66th Infantry (Light Tanks)
29th Ordnance Company
8th Photo Section
1st Radio Intelligence Company
51st Signal Battalion.

On account of the expansion requirements of the Air Corps there was no combat aviation of any kind available for the maneuvers.

Only arms and equipment as authorized by the Tables of Basic Allowances were used. No assumptions were permitted.

After the arrival in the maneuver area the period August 9th to 20th inclusive was spent by the Brigade in establishing camp and conducting Troop, Squadron, Regimental and Brigade problems. In addition the Brigade gave demonstrations for the 1st Division, the 18th Infantry Brigade, and the 26th, 27th, 43rd and 44th Divisions.

Corps Exercise

August 21st and 22nd

Two separate Corps Exercises were held simultaneously on August 21st and 22nd. One exercise was confined to the western half of the maneuver area and the other to the eastern half. Elements of the 7th Cavalry Brigade participated in both problems. (See Sketch No. 2.)

In the Western Portion

The 18th Brigade, with the mission of preventing the advance of a hostile force into the Saranac and Salmon Valleys, opposed the 1st Division (Motorized) as shown in the sketch. By 9:00 A.M. 21 August the 18th Brigade was heavily pressed.

The 7th Cavalry Brigade (less the 13th Cavalry, reinforced), on being made available to the Commanding General, 18th Brigade, made a rapid 18 mile march from its assembly area via Elsinore, and attacking at 10:00 A.M., secured the high ground north of Redford, closing the Saranac Valley to the hostile advance. Two batteries of the 68th Field Artillery were attached to the 25th Field Artillery to augment the artillery support of the 18th Brigade. Initially, mechanized reconnaissance elements only operated on the south of the 18th Brigade, the bulk of the Mechanized Brigade being held on the north flank.

During the afternoon it was found that the hostile main effort had developed on the south and was pushing east along the Salmon River Valley. The Commanding General, 7th Cavalry Brigade, was directed to leave a strong detachment in the Saranac Valley to hold the line Clark Hill-Picketts Corners and to move rapidly with the remainder of the command and check the hostile advance on the south flank.

After initial successes around Peasleyville, the situation became stabilized at dark. About midnight, persistent infiltration by the enemy through the wooded rough slopes flanking the valley threatened our artillery position, and the Brigade withdrew four miles to the east to a delaying position which it was occupying at the termination of the exercise. From this position it was prepared to counter-attack to the south.

In the Eastern Portion

During the same period the 13th Cavalry, with a battery of field artillery and detachments of engineers, air, maintenance and Medical Corps attached, was operating with the II Corps against the I Corps. The mission of each Corps was to secure a bridgehead over the Saranac River. (See Sketch No. 2.)

The 13th Cavalry (reinforced) with the 101st Cavalry attached, was released from its assembly area west of Schuyler Falls, one hour after the infantry was allowed to move. It quickly overran advance hostile motorized elements and seizing the high ground northwest of Beckwith School, held this dominating terrain until relieved by friendly infantry sent forward in trucks. It then moved to the northwest and operated against a hostile force which was supported by tanks in the vicinity of Woods Mills.

After dark the regiment withdrew into a night bivouac. At dawn it moved again to the north and located the hostile main effort advancing southwest against the II Corps which had succeeded in securing crossings over the Saranac River and was marching to the north. One squadron was dispatched immediately toward Woods Mills to assist friendly infantry in delaying the hostile advance at that point. The remainder of the regiment, consisting of one squadron of combat cars, part of the Machine Gun Troop, the Mortar Platoon, with one battery of field artillery and a regiment of horse cavalry (less 1 squadron) attached, made a coördinated surprise attack against the exposed west flank of the hostile marching column just as the exercise terminated.

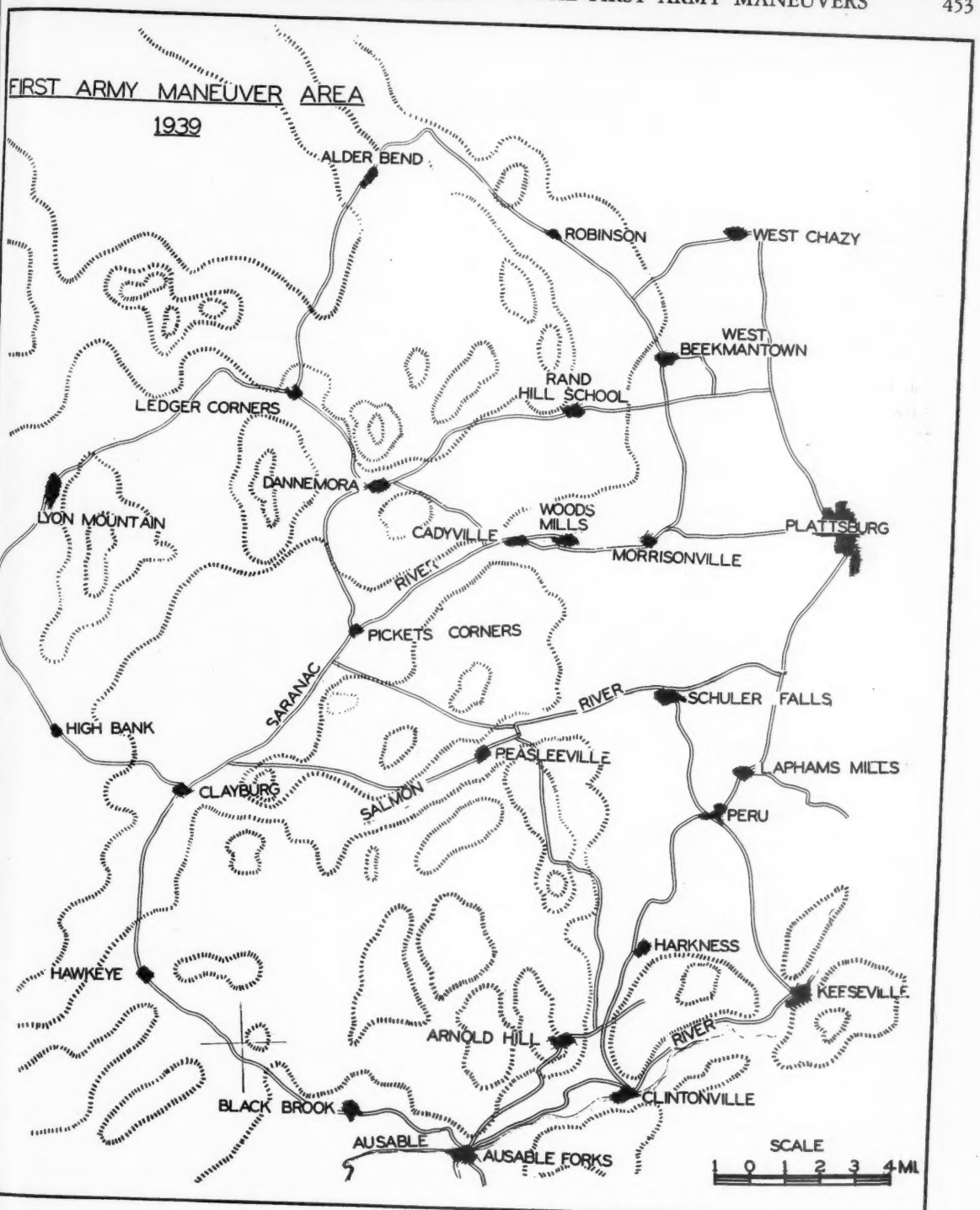
Army Exercise—23-25 August, 1930

(See Sketch No. 3)

General Situation: Without going into all the background, the General Situation for the Army Maneuvers was as follows:

A Black Army of two Corps which had penetrated to the west shore of Lake Champlain was preparing for further advance to the west. The Blue 18th Brigade, which had been gradually falling back in front of the Black Force, was reinforced by the highly motorized 1st Division and a Provisional Corps was formed.

At the start of the maneuver the 18th Brigade was near Saranac and the 1st Division in the region south of Redford. The Corps decided to march to the east and attack to gain the high ground on the line Woods Mills—Ma

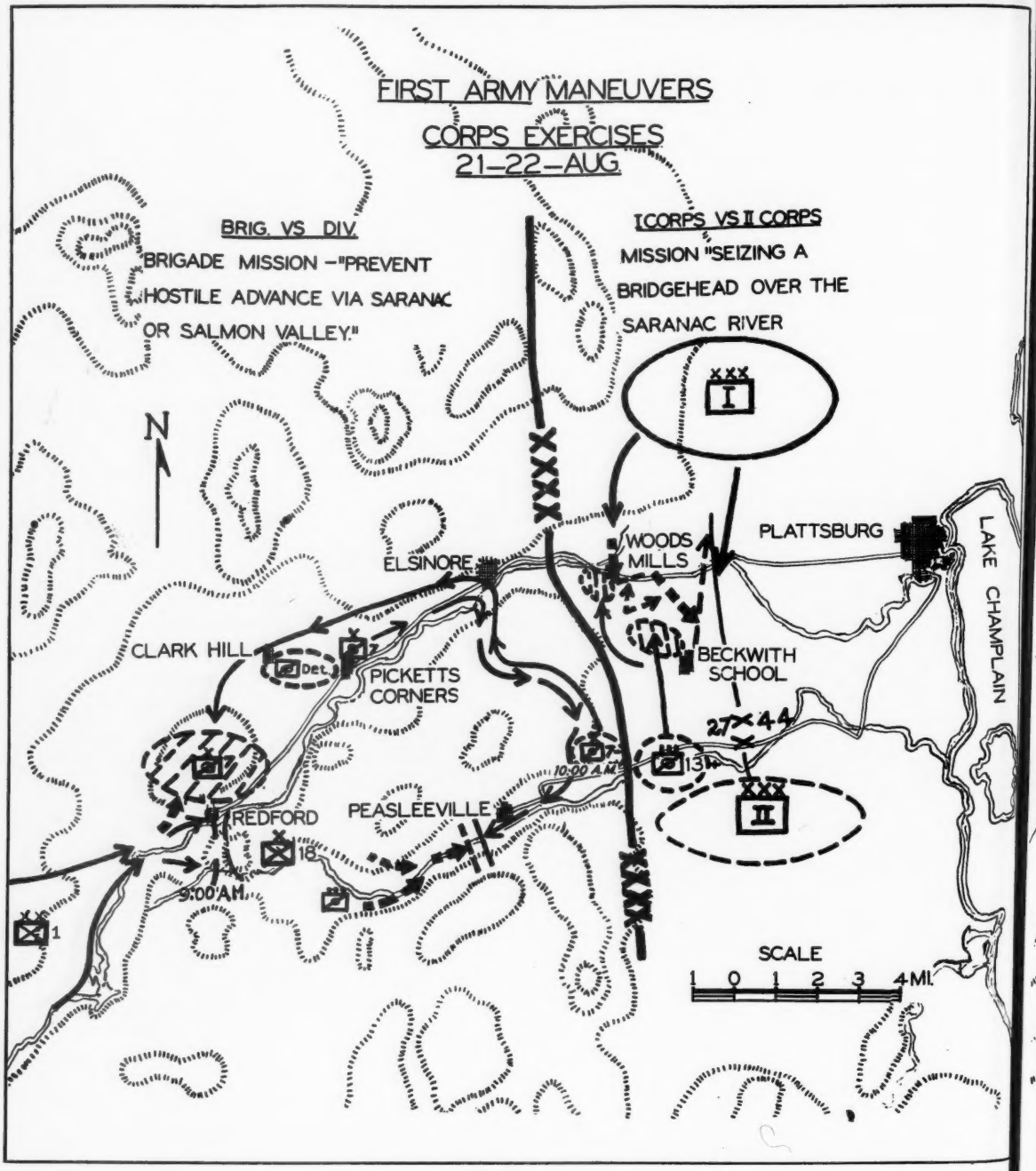


Sketch No. 1

tna. The Corps moved out at 12:00 Noon, 23 August. lements of the 1st Division in motors were soon near easleyville.

Under the conditions of the problem, the 7th Cavalry igade arrived at Black Brook at 12:00 Noon, 23 August d came under the control of the Provisional Corps. The ission given the 7th Cavalry Brigade was to march to the northeast prepared to attack the hostile left (south) flank or rear.

As to the operation of the 7th Cavalry Brigade in the Army Maneuver, it is thought that it would be more interesting for this account to come from a source other than a member of the Brigade. Major Rufus S. Ramey, Cavalry, an instructor at the Command and General Staff



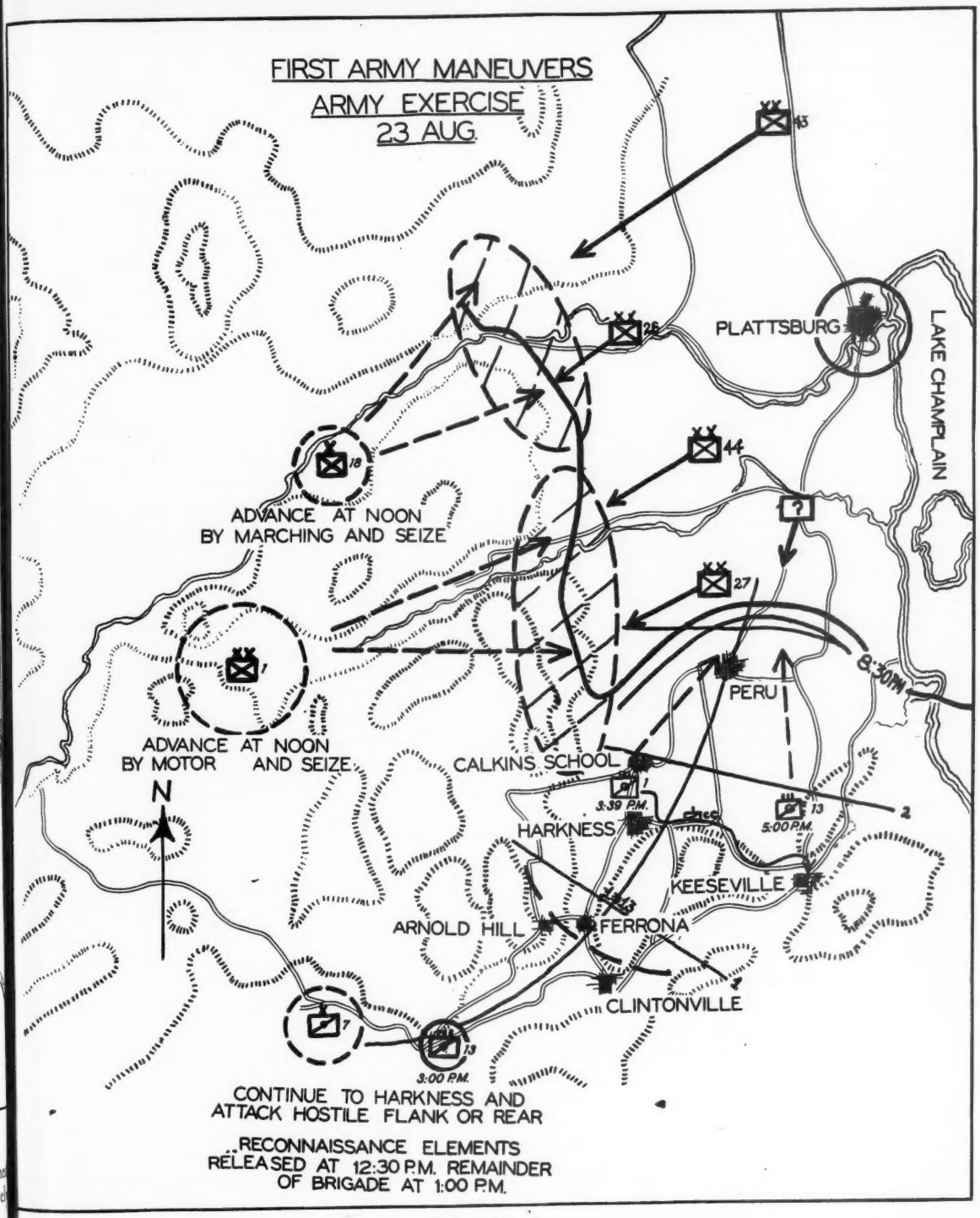
Sketch No. 2

School, was detailed by the War Department for duty both as an umpire and as an observer, and has kindly given his consent for the following extract from his report to be quoted in this article:

"It had been anticipated that Black would make a strong thrust north of the Saranac. Since a river crossing in the vicinity of Elsinore was required as a training exercise it became necessary to stop, arbitrarily, the rapid advance of elements of the 18th Infantry Brigade north of the Saranac. Immediately south of that river, however, the Black 101st Cavalry moved rapidly to the west, gain contact with the 18th Infantry Brigade and very effectiv delayed its advance throughout the afternoon.

"On its front the 1st Division made very effective u of motorized detachments by way of the Salmon Riv Valley, Patton School and Calkins School, at which poi junction with the 7th Cavalry Brigade was establish about 2:30 P.M., 23 August. (See Sketch No. 3.)

"In its front the 7th Cavalry Brigade reconnaissan elements quickly made contact with Black motorized



Sketch No. 3

achments in the vicinity of CLINTONVILLE, to the orth thereof and near HARKNESS: and developed the act that the CLINTONVILLE-HARKNESS defile was ffectively blocked by demolitions, where Black had apparently concentrated his antitank efforts. However, the parallel trails to the east and west of this defile, over COLD SPRING MOUNTAIN and ARNOLD HILL were neglected and permitted the mechanized cavalry to debouch into the more favorable terrain to the northeast of HARKNESS.

"While reconnaissance elements had cleared the CLINTONVILLE-KEESEVILLE defile of hostile motorized

and antitank detachments and were operating well to the north toward LAPHAM MILLS, the Mechanized Brigade Commander determined late in the afternoon to concentrate his effort to the northeast towards PERU and eventually against the south flank and rear of the hostile main force. The afternoon had seen a succession of isolated actions against enemy delaying detachments operating in the almost continuous defiles of this section.

"Shortly before dark on the 23rd, the 13th Cavalry was moving to the northeast of COLD SPRING MOUNTAIN and covering the brigade right flank by detachments in and north of KEESEVILLE. The 1st Cavalry, by a double envelopment was successfully occupying PERU. At this time (about 8:00 P.M.) the Commanding General, 7th Cavalry, by means of staff officers, directed that the combat elements withdraw at once, and move without lights, to concealed bivouacs in the general area: CLINTONVILLE-ARNOLD HILL-RJ 984-ROGERS for reservicing, rest and feeding in preparation for the following day's operations. (See Sketch No. 4.) The bivouac area was outposted and liaison with 1st Division maintained.

"Instructions had already been given by messengers for kitchen and fuel trucks to proceed to the bivouac areas when orders were received (as the troops were arriving in the bivouac areas) directing the Brigade to move to the west, thence to the north flank (north of the SARANAC RIVER) prepared for new operations at daylight 24 August. This movement called for the assembly of the brigade over difficult mountain trails, a night march of some 60 miles, all without lights, and after some 9 hours of strenuous operations.

"Previous orders were countermanded and new orders carried by staff officers. Assembly of march serials was completed and the march initiated at 11:15 P.M. (preceded by reconnaissance) with an amazing lack of confusion and minimum of delay. (See Sketch No. 4.)

"About 2:00 A.M., 24 August the Brigade was halted in march column between REDFORD and SILVER LAKE; kitchen and fuel trucks joined organizations to provide a hot meal and refuel. The march was resumed about 2:45 A.M. over a narrow road along the SARANAC, which was rendered hazardous by frequent temporary bridges and fills on a road which flanked the river.

"At SARANAC, regimental and similar commanders joined the Brigade Commander who issued instructions calling for the following:

"The Brigade to march via PICKETTS CORNERS to DANNEMORA. From there the Brigade, less the 1st Cavalry, reinforced by a battery of artillery and platoon of engineers, to march on RAND HILL; the 1st Cavalry to turn north at DANNEMORA, move via LEDGER CORNER on the line WEST BEEKMANTOWN-BEEKMANTOWN where it would report arrival and receive orders (a further wide swing of about 30 miles).

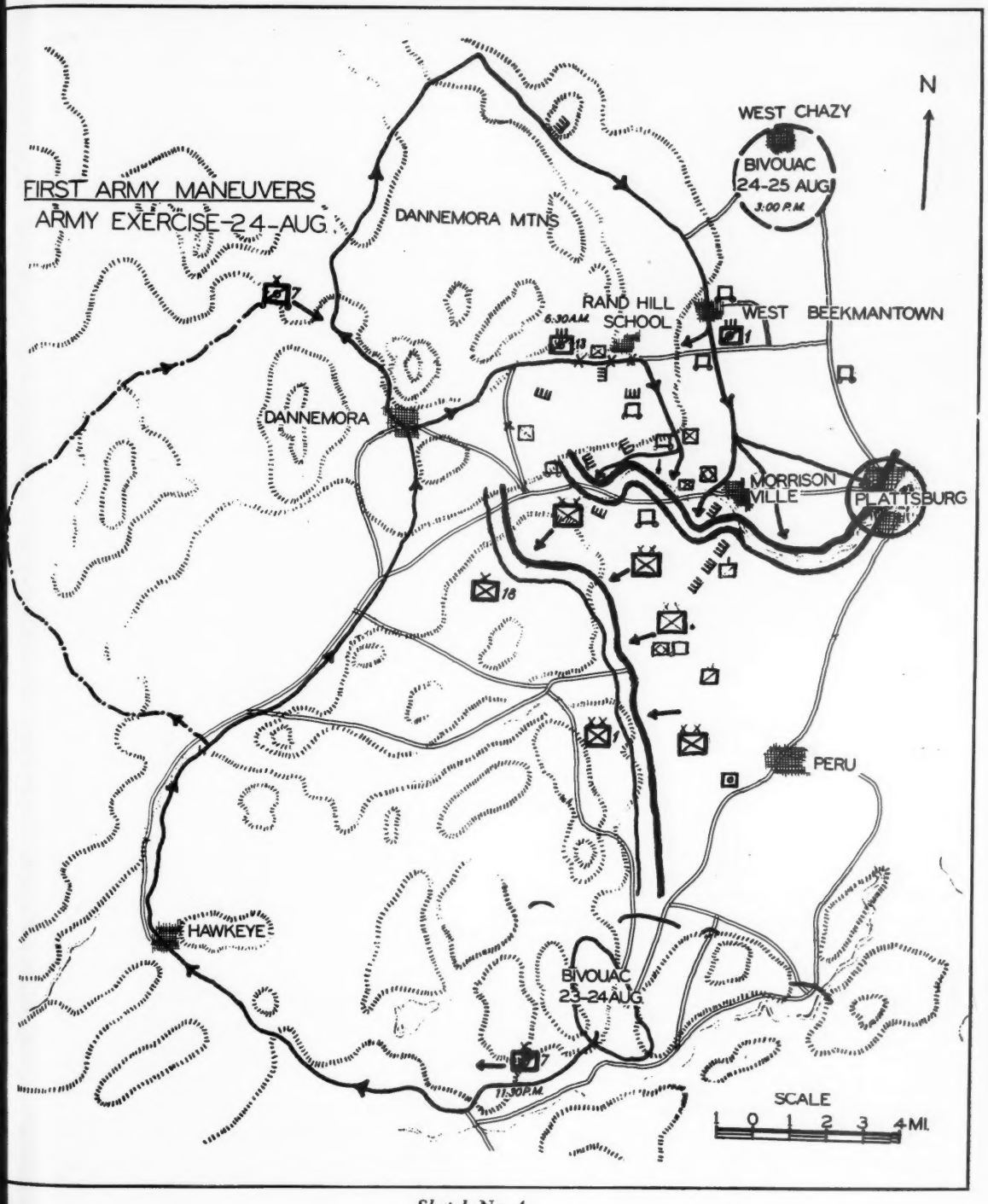
"On resumption of the march there occurred one of those contretemps which can so easily occur at night with all troops and especially with fast moving columns. A guide stationed at a cross roads near PICKETTS CORNERS became confused and directed part of the column on the wrong road. It was some time before the error was discovered and as a consequence the planned operation was delayed for more than one hour. Elements of the Brigade which had taken the correct route reached DANNEMORA at 5:15 A.M., but it was after 6:00 A.M. before the remainder of the column arrived.

"The unfortunate delay had two immediate consequences. Information was received about 6:30 A.M. that Black troops were crossing the SARANAC on two bridges to the west of ELSINORE and CADYVILLE respectively and that there was a large truck movement in the same vicinity. (This was the 43rd Division, the Black Army reserve, which was undertaking an envelopment directed against the north flank and rear of the Blue position.) The 13th Cavalry moved east from DANNEMORA in the direction of the hostile river crossing. About 2 miles east of DANNEMORA progress was effectively halted by hostile demolitions and anti-tank dispositions hastily provided after daylight. Earlier an armored car platoon had been in possession of the defile at CR 1161 (over CANFIELD BROOK) but for some reason had been withdrawn. As a consequence the advance of the 13th Cavalry for the next two hours was a succession of limited objective flanking actions against antitank dispositions in a continuous defile. Combined trains and service parks were halted at DANNEMORA whence they operated until late in the afternoon of the 24th.

"By 9:00 A.M. the 13th Cavalry had succeeded in pushing to RAND HILL but was held up by a Black battalion strongly supported by artillery. The 1st Cavalry was ordered to assist by flanking action from the east, then resume its advance.

"Following the combined attack to complete the occupation of RAND HILL, a terrain feature which dominated the entire northeast of the SARANAC, the 1st Cavalry was directed to seize the high ground about [illegible] miles northeast of WEST PLATTSBURG in order to assist the movement of the 13th Cavalry to the southeast (in a zone immediately east of SANDBURN BROOK). There was another purpose behind this plan—to clear the area in order to permit the movement of the fuel trucks which were urgently required for the replenishment of fuel.

"By the middle of the morning it was apparent that the entire area north of the SARANAC was infested with Black anti-tank detachments ranging from single 75-mm guns supported by infantry to entire batteries supported by battalions of infantry. These detachments were installing road blocks and completing assumed demolitions at the frequent defiles. From this time to the end of the maneuver the impression was gained that Black efforts were directed more to protection against the mechanized cavalry than to any offensive action. Actually it is believed that close to fifty per cent of the Black 75-mm. artillery was dispersed as antitank guns in his rear areas. By 10:00 A.M., the Blue Mechanized Cavalry was deep in the



Sketch No. 4

ack rear area, moving rapidly from north to south across e rear installations.

"By 12:30 P.M., 24 August, the main body of the 1st avalry had reached the road: MORRISONVILLE-LATTSBURG, with reconnaissance elements south of e SARANAC (which was readily fordable in a great any places southeast of MORRISONVILLE). About 12:30 P.M. the 1st Cavalry surprised a Black tank company going into what would have been an excellent ambush. In the ensuing action, the hostile tanks were ruled out. *Undoubtedly this head-on engagement would have been costly to both groups of vehicles.*

"By this time (shortly after noon the 24th) the Mechanized Cavalry Brigade had been continuously in action

Cadets at West Point inspecting equipment of the 7th Cavalry Brigade

since 1:00 P.M. the preceding day. Only part of the units had had one hasty meal. Necessary refueling and maintenance had been most limited. All ranks, but especially combat vehicle drivers, were fast approaching exhaustion though still filled with admirable enthusiasm and aggressiveness. Accordingly, orders were dispatched to withdraw all elements of the Brigade well to the north to the vicinity of WEST CHAZY for rest, reorganization and refueling. (Actually it is believed that this move was in conformity with the desires of the Maneuver Director in order to prevent the complete collapse of the remaining scheduled exercises—the extension of the Black envelopment combined with a night attack, Blue night withdrawal, and a daylight attack by Black on the 25th.) (See Sketch No. 4.)

"The 7th Cavalry Brigade completed its assembly in the WEST CHAZY area late in the afternoon in a torrential rain, trains joined units, all elements refuelled, the area was outposted, much needed rest was gained, and plans were announced for a resumption of the advance early the 25 August.

"The plan of operations for the 25 August provided:

"The Brigade to advance to the south, force a crossing of the SARANAC, seize the high ground as far as the SALMON RIVER, then turn to the southwest to strike the Black left flank and rear. (See Sketch No. 5.)

"Regiments to advance abreast in more than one column, the 13th Cavalry on the right; advance guards to cross the outpost line at 5:00 A.M.; reconnaissance detachments to move at 2:00 A.M.

"One Combat Car Troop 13th Cavalry to follow the 1st Cavalry as reserve.

"Trains to assemble and await orders in bivouac area (vicinity of WEST CHAZY).

"The advance to the south was initiated as planned. By daylight, reconnaissance elements had crossed and were south of the SARANAC. North of the SARANAC the main Brigade columns encountered frequent antitank 75-mm. guns and groups of machine guns which were promptly reduced by flanking maneuver and by artillery fire. By 6:30 A.M. the 1st Cavalry was crossing the SARANAC at the bridge immediately northeast of BM 294 (about 5 miles southwest of PLATTSBURG). Shortly afterwards the 13th Cavalry encountered serious resistance at the bridge at MORRISONVILLE (consisting of two batteries of 75-mm. guns and machine guns) which was being reduced when the exercise terminated. Here at MORRISONVILLE the 1st Cavalry surprised and captured important Black Army headquarters installations. The 1st Cavalry and reconnaissance elements were moving to the south of the SARANAC deep in the Black rear. The exercise was terminated shortly after 7:00 A.M., 25 August.

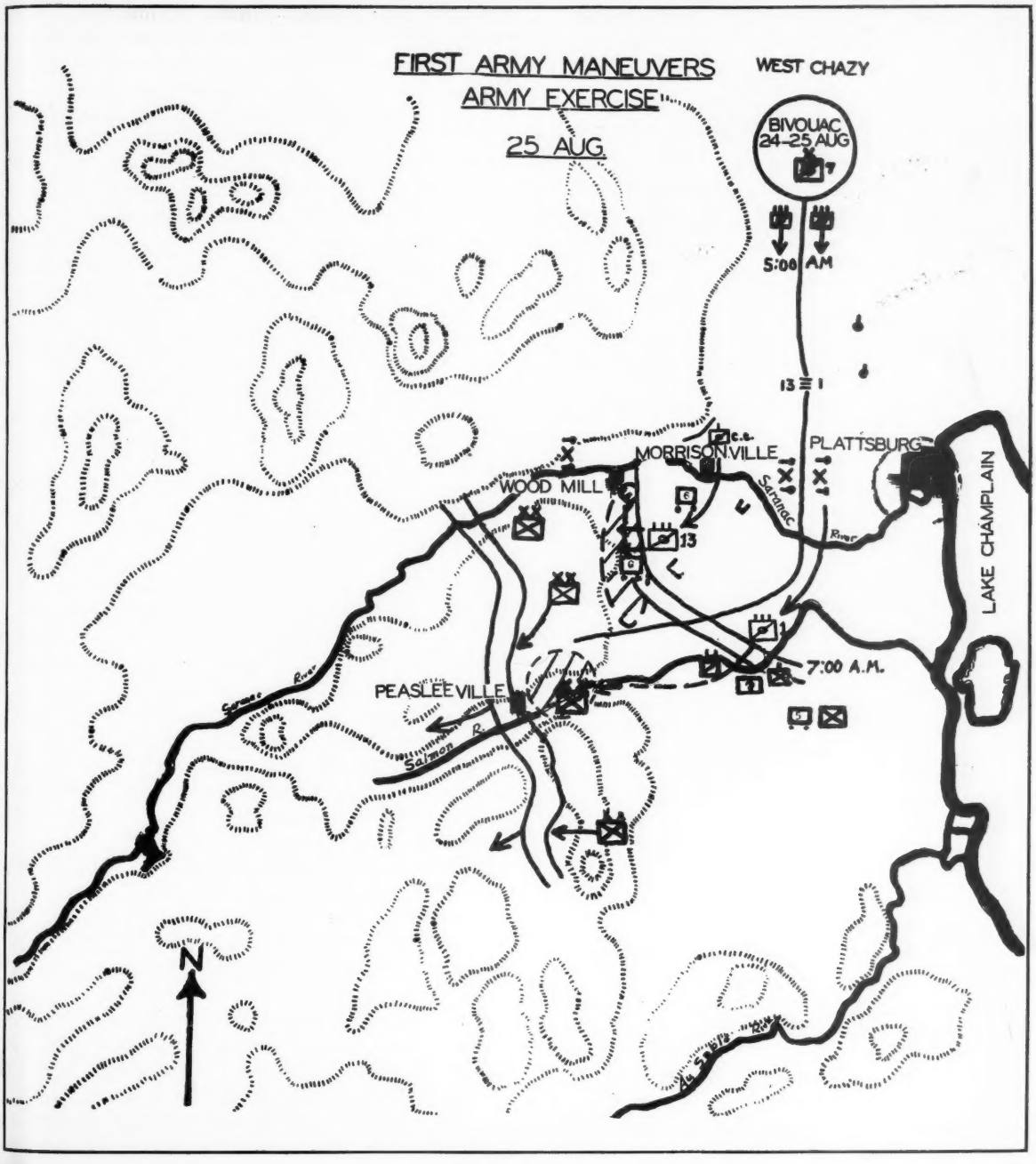
"Since the 7th Cavalry Brigade assembled promptly and marched immediately across the Black rear in returning to the base camp at BLACK BROOK, an opportunity was presented to observe Black protective dispositions in his rear areas. In addition to the bridge defense at MORRISONVILLE, there was a large concentration of all arms just north of BECKWITH SCHOOL with 75-mm. guns disposed for antitank defense. A similar disposition was observed northwest of SCHUYLER FALLS and frequent 75-mm. guns and infantry detachments observed as far south as PERU. This is mentioned to indicate the psychological effect of the mechanized cavalry as well as to emphasize the dispersed nature of the Black antitank defense.

"The following comments on the Army Exercise are deemed important:

"The rapid night march of the 7th Cavalry Brigade without lights, from the south to the north flank, demonstrated the great strategical mobility and value of the unit.

"Continuously demonstrated was the serious need for a reconnaissance and support echelon for the Mechanized Cavalry Brigade—to consist of reconnaissance elements and a fire support group of machine gun and rifle units. Such a composite unit would provide the necessary br

Lieutenant General Drum addresses Officers and men of the 7th Cavalry Brigade



Sketch No. 5

gade reconnaissance elements, protection for trains, and required mobile fire support.

"Night movement of the Brigade without lights (except for concealed indirect rear wheel illumination) demonstrated that rates as high as 15 miles per hour on fair roads (except in dust) is feasible.

While the total lack of suitable antitank weapons exercised a decided influence, yet one lesson stood out—that was the necessity for careful coördination of antitank protection and the maintaining of mobile antitank units. Piecemeal demolitions, road blocks and dispersal of antitank means is entirely ineffective.

"The rapidity of mechanized cavalry action, the speed with which units energetically lead may disperse against targets of opportunity, was recognized by the Brigade Commander who guarded against such action by assignment of successive objectives and frequent phase lines from which units reported, then advanced therefrom only on Brigade orders.

"Experience in these maneuvers demonstrated the need

Combat car in action during maneuvers

for a greater number of trained assistants in the operations section of Brigade Headquarters who may be used as liaison officers. The kaleidoscopic change of the situation in mechanized cavalry operations makes necessary the dispatch of orders, frequently by officer messenger. Also, adequate, timely and correct appreciation of the existing situation can be gained only through staff officers' conferences with advance commanders and reports of observations.

"While the maximum mobility and effectiveness of mechanized cavalry is only obtained in favorable terrain, the broken terrain of the PLATTSBURG area demonstrated that terrain must be difficult in the extreme to constitute a complete barrier to mechanized units.

"The umpiring of mechanized cavalry operations is a difficult problem. In this maneuver, umpires were provided down to include the squadron. It is believed necessary that sufficient umpires be provided with mechanized cavalry to include the troop unit because of the many isolated actions which develop in reconnaissance and in maneuver against antitank dispositions.

"Similarly umpire communications with umpire headquarters and contact umpires is a difficult problem in mechanized cavalry operations. Pigeons were used by the senior brigade unit umpire as a means of communication with Umpire Headquarters.

"In conclusion, it is desired to pay tribute to the high degree of training and leadership demonstrated during the operations of the 7th Cavalry Brigade. The enthusiasm, the devotion, and efficiency of all ranks and units, displayed throughout an arduous period of one month, was an inspiration. The existing mechanized cavalry brigade is an extremely well trained unit which, in the First Army Maneuvers, forcibly demonstrated its effectiveness in mobile exercises—though operations were often in terrain far from favorable to the exploitation of mechanized cavalry capabilities."

During the maneuvers, Mayor La Guardia of New York City made a request for the presence of the Brigade at the New York World's Fair. This request was approved by the War Department and on August 28th, three days after the close of the Maneuvers, the Brigade, including its track and half-track vehicles, commenced its march of 350 miles to New York City where it was to camp just outside of the World's Fair. En route it passed through West Point where it was reviewed and inspected.

The entire column of over 600 vehicles was received in New York City by the Mayor and Lieutenant General Drum. From the George Washington Bridge it marched down the west side of New York, north up Broadway and Fifth Avenue and over the Queensboro Bridge.

Leaving the camp at the World's Fair at 1:00 A.M., September 8th, after again loading its track and half-track vehicles, the Brigade reached its home station, Fort Knox, on the 13th of September.

During the last 36 hours of the march the brigade travelled 390 miles. This included a short bivouac at Hamilton, Ohio, and five-hour halt in Jeffersonville to unload its track vehicles and reorganize. The last 40 miles of the journey were made by the brigade with all its vehicles.

Upon arrival at its home station, the Brigade, exclusive of maneuver operations, had marched a distance of 2,238 miles in 15 marching days.

Conclusions

Mechanized Cavalry is a highly technical weapon, and in order to function efficiently requires experienced, well trained personnel in all grades. Due to its high mobility and great radius of operation, its supporting troops must be familiar with its tactics and technique. This familiarity can be attained only by constant combined training.

Mechanized Cavalry is a powerful striking force capable of operating effectively even over very difficult terrain. It is also capable of making long strategic moves rapidly, under cover of darkness, and without lights.

A Mechanized Cavalry Brigade should be employed as a combat team in order to realize the full value from its air service, ground reconnaissance, combat car, machine gun and artillery elements. It is a mistake to divide the Brigade and a greater mistake to divide the regiment which is the basic combat unit.

Mechanized Cavalry should be assigned to those missions of mobile combat which are most important to the success of the Army. Its successes or failures are capable of affecting the operation of the entire Army.

Mechanized Cavalry must be preceded by adequate reconnaissance, both ground and air in order to locate obstacles, ambushes and anti-mechanized weapons. Likewise it must be covered by security detachments to prevent surprise and provide freedom of action when hostile forces are encountered.

Mechanized Cavalry must leave roads and move cross country when within the range of hostile artillery.

Mechanized Cavalry should not be assigned the mission of holding extensive sectors during darkness, particularly in terrain which severely restricts vehicular maneuver. It should be relieved at dusk and withdrawn for the purpose of feeding the personnel and the refueling and maintenance of vehicles. Under cover of darkness it should

then be moved to a point from which it can launch an offensive blow at daylight. *The personal rather than the mechanical factor controls the limit of endurance.*

Mechanized Cavalry gains surprise by:

Secret marches at night without lights.

By the use of feints and demonstrations while the direction of the main effort is kept concealed.

By rapid movement even though observed. Time and space factors often do not permit the enemy to make or change dispositions in time to counter a mechanized thrust.

Mechanized Cavalry, due to its great fire power, rapidity of action and striking ability, has a decidedly adverse effect on the morale of other ground troops who realize the comparative ineffectiveness of their small arms fire against rapidly moving armored troops.

Not only infantry regiments and divisions, but the rear areas of Corps and Armies must possess adequate means for anti-mechanized defense.

In order to provide for defense against the threat of the Mechanized Brigade in the recent maneuvers the Black Army was forced to use its organic artillery. This resulted in the supporting fire of many battalions being lost to the front line units at times when their fire support was sorely needed.

When infantry is equipped with adequate means for anti-mechanized defense, and makes dispositions which would afford protection against mechanized attacks from any direction, such as a cordon defense, it is in danger of losing its mobility and becoming defensive minded. The same may be said of horse cavalry.

Infantry tank units do not possess the auxiliary means of reconnaissance and support to successfully oppose a strong force of mechanized cavalry.

Reconnaissance from unarmored vehicles is often of doubtful value and very liable to be most costly in men and vehicles.

The majority of the road blocks encountered during the maneuvers were not sufficiently extensive or defended strongly enough to be more than temporarily effective. The bulk of the mobile anti-mechanized units should be held centrally located and in readiness for quick dispatch and employment in previously reconnoitered positions upon receipt of timely information from air and ground reconnaissance.

The best defense against a powerful mechanized cavalry is a similar mechanized unit.

Both horse cavalry and motorized infantry are ideally suited to support mechanized cavalry and to operate in conjunction with it. Horse Cavalry is capable of operating more rapidly when the distance is short; motorized infantry when the distance involved is long.

Prior to September, 1939, the question as to what part mechanization was destined to play in large scale modern warfare was largely an academic one. This question, however, was answered most conclusively on the battlefields of Poland within a few days after the close of the 1st Army Maneuvers, when the German Army, using its mechanized divisions so successfully and decisively conquered a valiant army of a million men in the amazingly short period of two weeks. The lessons brought out by the maneuvers of the 1st Army and other such maneuvers have been confirmed by war.

An Observer at The First Army Maneuvers

By MAJOR T. J. HEAVEY, *Cavalry*

Corps Exercise, August 21st–22d, The Western Portion 1st Division (Blue) vs. 18th Brigade (Black) reinforced by the 7th Cavalry Brigade.

In submitting any comments, it is well to keep in mind the old saying, that, hindsight is far easier than foresight. No criticism is in order, nor intended. However, it is felt that some tactical principles may be reviewed.

To begin with, the result of the attack ordered on the north flank, ordered *in advance of the development of the situation,* resulted in a blow in the air. The Blue troops north of the river, at the time the attack order was issued, had proceeded south of the river by the time the mechanized attack was launched. But one companay remained north of the river, and their primary mission was to hold the bridges. Regardless of the advance of the attack, the bridges at REDFORD and SARANAC were still denied to any Black units, as they had been prepared for destruction.

Prior to the actual attack on the north flank, the combat car elements of the 1st Cavalry were assembled stationary, for a period of about thirty-five minutes, while the attack order was issued. During this entire time they were under the alleged fire of some seven Blue batteries of artillery, firing with the assistance of air observation. Incidentally this situation was responsible for the umpire decision of but "partial" success. The lesson, I think, indicated here is the extreme risk taken by a unit of this type which halts for any considerable period of time within artillery range in a close formation. It is practically impossible to insure that a maneuver of a unit this size will not be picked up. Even without air observation, which was present in this case, the high dust clouds that accompanied the movement, whenever it was off hard surface roads, were plainly visible for miles. It appears that speed of action when an attack is imminent is essential for the success of a mechanized attack.

The breaking up of the combat team of the mechanized unit in this maneuver greatly hindered its possible effectiveness. Obviously, without any horse cavalry for flank protection the Black commander had no other choice. But it resulted in a piecemeal action, which although of great assistance on the south flank in the afternoon attack,

still denied the Black commander the fine opportunity of striking a powerful and even decisive blow against what probably would have turned out to be a too impetuous advance of motorized infantry.

The value of mechanized units on defensive missions *in darkness* seemed to be highly contentious. A number of umpires labored under difficulties in evaluating the situations that arose. Some held that it was impossible for infiltrating infantry to "capture" mechanized vehicles in the dark. Others simply ruled that the mechanized vehicles were captured, and being senior umpires, this decision held. The development of tactical principles on this moot question seem to be in order. It is my opinion that a reasonable number of bayonets and pistols are certainly a strong counter to the limited number of "Tommy guns" that can be utilized in the pitch darkness. If you add to the bayonets and pistols some gasoline bottles, a l'espagnol, as were vociferously claimed by the infiltrating infantry in some cases, the argument simply gets beyond control. Anyhow, on both flanks, the mechanized units withdrew, and I am under the impression that it was not by umpire direction, but a matter of choice. Possibly, I am again in error. But I do see practicable advantages to the accompanying of any mechanized unit on night security missions with some additional dismounted men.

The question of terrain comes in. The better terrain for the operation of mechanized units was north of the SARANAC river. Inasmuch as the 1st Division had little anti-mechanization weapons other than its own artillery, this would *not* be the obvious place for them to operate, and the Blue division commander apparently had the same thought. While the terrain south of the river was tough going, the *capability* of Blue action here, I believe, should have been given weighty consideration before the mechanized units were committed to the north. But I candidly admit that this is "hindsight" at its worst.

There were some other impressions gained from observing this maneuver. It should be mentioned that the 1st Division is a homogeneous unit, and had been able, prior to the maneuvers, to get some staff training. The smooth operation of the entire combat team was edifying. Orders were very quickly issued and distributed; incidentally, necessary duplicating means were available and worked to perfection. The orders were short, concise, and usually accompanied by overlays that were in sufficient quantity for proper distribution. The use of motor transportation for troop movements functioned without trouble, or confusion. Also, it may be mentioned that this division was completely motorized according to present tables. On the other hand, the 18th Brigade was still our old type infantry. When the necessary transportation for housekeeping needs were taken, none was left for tactical purposes. The brigade was assembled for the maneuvers and few facilities existed for staff training. The value of teamwork and familiarity of staff officers with units, etc., was evidenced by the results of the maneuver. The speed of operation of the 1st Division was greatly underestimated by the 18th Brigade initially, but they did a great job in extricating themselves from an intolerable situation in actually getting away with a daylight withdrawal in the face of an enemy force of twice their strength, which had the tremendous advantage in mobility due to trucks. The conduct of the advance at night, and the night attack by the three battalions of the 1st Division was exemplary. Contrary to the written documents on this type operation, units did not get badly mixed up, and were ready to push on in good order at dawn, and they did this over very rough ground. The maneuver also was one of the rare ones without any artificial control. After the initial situation the action was free to develop as the situations arose, and was of far greater instructional value than the later "controlled" maneuver.

During this exercise there was a squadron of regular Cavalry on "housekeeping" duty at the umpires' camp near Schuyler Falls. Perhaps I may be pardoned by thinking of them in connection with this exercise. After all it was not a "pay" problem for either side, nor for me, so flights of fancy I trust are in order. Had the CG, 18th Brigade, had such a force, I am pretty sure he would have followed the plan of action I roughly outline. (In fact, during the exercise I overheard this General make some remarks as to what he could do IF he had horse Cavalry . . . but I refrain from any direct quotation, inasmuch as the language was just a bit more frank than is usually printed.) Of course the horse Cavalry, once contact was made would have been on the flanks of the 18th Brigade, with some scout cars further out. A small horse cavalry force on the north flank would have been just as valuable to the 18th Brigade as the blow in the air of the mechanized unit, in so far as the main action of the Blue defense was considered. The bulk of the squadron would beyond a reasonable doubt have been on the south flank. The horse units would not have been any great help in stemming the quick and violent thrust of the 1st Division initially, but I can not conceive of the movement around the south of the 18th Brigade by motors IF the squadron (less a troop) had been here. There was but one road, woods on both sides, and sufficient clearings to give ideal delaying and ambush actions. The advance, of course, could have been made in due time, but very little of it by motor. Now, having delayed this advance, as I feel sure would have happened, I could not keep from picturing the possibilities of utilizing the entire mechanized force to smack into this advance on the south just as it got well going in the comparatively narrow Salmon river valley. One combat car troop did strike it at 3:00 PM, and with considerable success. What the outcome would have been had the entire regiment, supported by the three batteries, been present is left to your individual imagination. I am glad to say that my imagination is very vivid on this point.

Another thought came to me during the night phase of this exercise. I have previously mentioned that the mechanized units withdrew on both flanks during darkness, under the pressure of the infiltration tactics of the 1st

Division. Had the horse units been available, of course they also would have pulled back, but they would have maintained contact and had a general picture to present the mechanized units at dawn. And I believe that the mechanized units, less perhaps their artillery, should have been well back anyhow. As dawn broke, August 22d, the possibilities of a quick push against the south flank of the 1st Division by a coördinated mechanized attack had almost limitless possibilities. Terrain was favorable, the main attack of the 1st Division would have been taken in flank, and again my imagination gets out of hand. In the problem as it worked out, this counterattack as indicated was actually ordered by the commander of the 18th Brigade. It was fortunate in a way that it did not take place. The assembly point of the mechanized units had been spotted by air observation at dawn, and its advance would have been met by a deluge of artillery fire. From eight to ten 75-mm. guns were quickly rushed up for anti-tank direct fire missions, and a battalion of Infantry in trucks, were in position to meet any mechanized advance shortly after daylight. Had the attack been launched as ordered it would have been quite a scrap. No element of surprise was possible, and the bulk of the 1st Division artillery was within range to meet it. In addition to the individual guns ALL the Blue artillery had been warned to meet it.

In winding up the discussion on this exercise, the big lesson to me was that great opportunities were presented for the combined use of horse and mechanized cavalry. However, the attempt to use solely mechanized cavalry on all distinctly cavalry missions resulted in dispersion of force, piecemeal actions, loss of organization, and was a severe handicap to the mechanized forces available in their efforts to function as a combat team.

The operations in this maneuver were initially very interesting to the Blue units. However after the artificial control entered, the tense "play the game" attitude of all, from the lowest private up, decidedly ebbed. Although the rigid control of a maneuver may at times be highly desirable, still on the other hand, it is doubtful in my mind whether the loss of spirit, and lack of interest that is bound to ensue, is not too great a price to pay. Lessons learned through errors of omission and commission in peace time maneuvers are not paid for in lives, and are far more lasting in effect when actually let go to bring home to all concerned the appalling results. When the operation is smoothed out to save some individual's feelings, it is nothing more than mild kidding, which at this phase of the nation's welfare, is to me highly out of place.

The powers of horse cavalry to delay an Infantry advance were well illustrated in the initial advances of the 18th Brigade. It is mentioned that in the final critique on the maneuver one Black Corps commander warmly praised this regiment of horse Cavalry. I heard just as sincere comments from personnel of the 18th Brigade as to how much of a nuisance the opposing horse cavalry was. So it appears that this lone regiment of horse cavalry was duly appreciated, and respected by both friends and foe. Had the Blue force been able to use any horse Cavalry, I am quite sure that similar comments would have been heard as to its value. Where it would have been of particular value would have been on the north flank in feeling out, and definitely knowing, what the mechanized force would have to meet in its first attempt to work on the north flank. As the problem worked out, the mechanized units had to advance into an absolutely unknown situation that was very costly to its advance reconnaissance elements.

I would like to raise the issue as to whether we are not being wilful in putting entire reliance on the caliber .50 machine gun as our heaviest weapon. The assumption that we will never be engaged with infantry tanks is specious. Many foreign "tanks" carry more armor than our vehicles do. I am candid in stating that I believe serious consideration should be given to the study of putting a real anti-tank weapon on some of our combat cars. If the new 37-mm. gun is too big, there are lighter weapons in use by the Navy, that may not be too big. Of course, not all combat cars need these, but what about at least four to six in the regiment? With even this small number we would not have to run from medium tanks, and by limiting the number it should prevent any commander from getting too enthusiastic and asking us to pick a fight with medium tanks.

I have ventured a remark prior to this as to my imagination. Just to prove it I am closing with two other suggestions. The morale effect of the attacks of our combat cars was variously reported to me. Some criticism was heard of a column of vehicles coming down a road with sirens screaming, and some others as to what actual damage could be done even if the vehicles were off the road, etc. To be honest, I do not think that we have reached the ultimate in a combat car attack by any means at all. We have a $30,000 vehicle carrying three machine guns. The air corps has more expensive vehicles, but they do not limit their guns to this number in attack. Would we be foolish or wise to add two additional guns mounted on the combat car for attack purposes, these guns to be operated by the driver by an electric solenoid trigger mechanism such as the attack plane uses? I think we would be very wise. And what have we for "mopping up" as we reach the objective? Is it assured by any means at all that our vehicles will not be subjected to gasoline bottles *at the objective* as the Spaniards were? Too much reliance on a Tommy gun from a port may prove ill-advised. Let us suppose that our first line of combat cars all carried from twenty to forty grenades in a spring container that could be discharged as the objective is gained. Believe it or not I tried out a wrinkle of this type once, using potatoes in lieu of grenades. I was amazed at the beautiful pattern laid out when I pulled the string at 25 miles an hour, and also impressed by the number of potatoes that landed up in *low spots* on the ground. They rolled into ditches and chuck holes and STAYED there. If, in lieu of potatoes, three-second fuzed grenades were used, I am convinced that the bottle throwers would have lost interest.

Cavalry Division Maneuvers, October, 1939

By LIEUTENANT COLONEL E. E. SCHWIEN, *8th Cavalry,* Deputy Chief Umpire

The Cavalry Division maneuvers in the Balmorhea region which have just terminated were divided into four phases. The first and third of these phases were purely mechanical exercises and as such are of little interest to the reader of this article. The second phase consisted of a two-sided maneuver in which one brigade maneuvered against the other. Unfortunately in this exercise, the area of contact contained one important hill mass which immediately became the bone of contention. The maneuver started with the two brigades separated by approximately forty-five miles. Each brigade rushed an advance detachment forward for the purpose of seizing this Hill. The detachment of the Second Brigade was motorized and consequently reached the key terrain before that of the First Brigade. The remainder of this phase consisted in efforts of the First Brigade to dislodge the advance detachment of the Second Brigade and finally culminated in a mounted attack by the Second Brigade on the flank and rear of the First Brigade.

* * *

The real interest of the maneuvers can be found in a study of Phase IV, in which the whole Cavalry Division operated against a motorized Infantry Combat Team from the Second Infantry Division. This Combat Team consisted of the 9th Infantry with a battalion of truck drawn artillery attached.

In this review we shall first give a brief narrative account of the operations of Phase IV and then in conclusion attempt to enumerate the more important lessons which were brought out.

The instructions issued to both sides initiating the operations were as follows:

"SPECIAL SITUATION (BLUE)

Situation at 4:00 PM, 24 October. At 4:00 PM, 24 October, the Commanding General, 1st Cavalry Division, receives a message from the Commanding General, Third Army, an extract of which appears below:

* * *

"Reliable information indicates that a hostile motorized infantry regiment, reinforced by light artillery, truck drawn, is in bivouac at Kent. The Third Army commences retirement to a new defensive position along the general line of State Highway 17 from RJ 232 through PECOS *(northeast of maneuver area).*

You will gain contact with the hostile force reported at KENT, and should it advance to the east on US Highways 80 and 290, delay its advance and maintain a passhead at the exit of the pass through the DAVIS MOUNTAINS on the MADERA SPRINGS ROAD.

The 1st Cavalry Division will operate south of the south boundary of the C. O. FINLEY land (exclusive).

No reconnaissance permitted prior to daylight (6:00 AM), 25 October.

ADMINISTRATIVE INSTRUCTIONS. For the purpose of this problem, it is assumed that the Madera Springs Road extends through the Davis Mountains to Marfa, Texas.

* * *

"SPECIAL SITUATION (WHITE)

Situation at 4:00 PM, 24 October. At 4:00 PM, 24 October, the CO, Infantry Combat Team receives a message from the CG, First Army, an extract of which appears below:

* * *

"Reliable information indicates that the Blue Third Army is maintaining its position with difficulty. Horse Cavalry estimated as a division (less a brigade) is protecting its west flank from a position astride US Highway 290 about three and one-half miles northwest of RJ 167 (1109.3-849.5). Another cavalry force estimated as a brigade is reported in the vicinity of WP 180.

Marching at 7:00 AM, 25 October, on US Highways 80 and 290, you will gain contact with the hostile cavalry on the south flank of the Blue Third Army, drive it to the southeast and secure the exit of the pass through Davis Mountains on the Madera Springs Road.

The Infantry Combat Team will operate south of the south boundary of the C. O. FINLEY land (exclusive).

No reconnaissance permitted prior to daylight (6:00 AM), 25 October.

* * *

ADMINISTRATIVE INSTRUCTIONS. For the purpose of this problem, it is assumed that the Madera Springs Road extends through the Davis Mountains to Marfa, Texas."

* * *

As a preliminary step on the afternoon of October 24th, prior to the beginning of the maneuver, the 9th Infantry Combat Team moved to a bivouac near Kent while the Cavalry Division (less First Brigade) went into bivouac approximately two miles northwest of RJ 167. The First Brigade moved into a bivouac near Water Point 180 where it was to remain out of the picture during the first part of the maneuver in order to give the Combat Team sufficient preponderance of means to enable it to take the offensive.

Early in the evening of October 24th, the Division Commander arrived at a decision to delay initially by placing the Second Brigade in position along the high ground about three and one-half miles northwest of RJ 167, astride Highway 290. His plans contemplated holding this position all day of the 25th if possible, withdrawing only under cover of darkness the night of the 25th-26th.

By 7:00 AM, October 25th the 2nd Brigade had occupied this position, with the 7th Cavalry north of the road and the 8th Cavalry south thereof. During the morning of the 25th the position was attacked by the advance guard battalion (3rd battalion) of the 9th Infantry. The latter

"Keep them rolling."

had moved up from Kent by motor. The main strength of the attack came against the left front of the brigade position, which was held by the 2nd Squadron 8th Cavalry. By noon the entire infantry advance guard battalion had been committed frontally and the action was stalemated. During the afternoon the infantry advance guard was reinforced by another rifle company and part of a machine gun company which started to infiltrate around the Brigade left flank. Late in the afternoon the infantry renewed the attack and about dark the 2nd Brigade began its withdrawal to a second delaying position on the high ground to the east and southeast of RJ 167. Some difficulty was encountered carrying out the operation due to the failure of units on the right to withdraw until practically surrounded by the enemy. The withdrawal however was completed about 10:00 PM.

It was the intention of the Division Commander to hold this second delaying position as long as possible during the day of the 26th. This plan was completely disrupted however by an unforeseen maneuver executed by the infantry. During the night the 9th Infantry Commander dispatched his 2nd Battalion reinforced with a battery of field artillery in a wide encircling movement through the Davis Mountains to the south via Fort Davis and Toyahvale on to the rear of the Division.

No effort was made to properly secure this movement with an advance detachment. The Infantry Commander took a long desperate chance in trusting that the cavalry would fail to properly defend this avenue of approach. The battalion covered this distance of approximately one hundred miles over an extremely rough route during the night and about an hour before dawn appeared on the rear of the division at the junction of Highway 290 and the Madera Springs road. The divisional reconnaissance troops, belatedly dispatched to the rear to take care of such an eventuality, suddenly and unexpectedly encountered this battalion near this road junction. The resulting melee afforded the division sufficient delay to enable it to withdraw its trains and initiate a hasty withdrawal of its combat units to a final delaying position further to the south.

In the meantime in order to prevent somewhat of a débâcle, the Chief Umpire decided to place the 1st Brigade at the disposal of the Division Commander. The latter then decided to withdraw the division (less 1st Brigade) to a position on the high ground northwest, north and northeast of the Quarry (1108-837) and to move the 1st Brigade from Water Point 180 northeast along the Madera Springs road against the infantry which had appeared on his rear. The 2nd Battalion 9th Infantry (encircling force) had received the mission of seizing and holding the high ground about two miles southwest of the junction of Highway 290 and the Madera Springs road. This it did in spite of the action of the Reconnaissance Troop. Fortunately for the division it then made no effort to interfere with the withdrawal of the latter to its final delaying position. In the meantime the 1st Brigade, hastily breaking bivouac, moved northeast up the Madera Springs road. Contacting the 2nd Battalion 9th Infantry, it encircled the latter and occupied a position between it and the remainder of the 9th Infantry.

During the morning, the remainder of the 9th Infantry engaged in the frontal pressure and moving by truck, followed up the withdrawal of the 2nd Brigade via the unimproved road just south of Cherry Canyon.

The 9th Infantry (less 2nd Battalion) and the Cavalry Division (less 1st Brigade) then engaged in a series of confused actions in the area north of the Quarry. Finally, the Division Commander ordered the 2nd Brigade to envelop the left (east) flank of this direct pressure force and at the same time he notified the 1st Brigade to leave a small containing force to watch the 2nd Battalion and

to move the bulk of its force in a wide envelopment to the north against the rear of the forces engaged with the 2nd Brigade.

This plan culminated in a converging attack against the left (east) flank and rear of the 3rd Battalion 9th Infantry. As a result of this attack this Battalion was ruled out of action and both brigades were assessed heavy losses.

During the night of the 26th-27th, the Cavalry Division withdrew the bulk of its forces to the south to reorganize. It left covering forces to maintain contact with the infantry.

Early on the morning of the 27th, both sides were issued a new situation reversing the rôles of the opposing forces. Extracts of their instructions follow:

BLUE (1st Cavalry Division)

* * *

"Out IV Corps attacks at daylight (maneuver time 1 November) making its main effort with its left. You will assist the advance of the IV Corps by attacking the motorized infantry force in your front and driving it to the west.

The Cavalry Division will operate south of the south boundary of the C. O. FINLEY land (exclusive)."

* * *

WHITE (9th Infantry)

"You will delay any advance of the hostile cavalry force now in contact with you and hold it east of draw running through RJ 167 (1109.3-849.5) until dark 27 October (maneuver time 2nd November).

The Infantry Combat Team will operate south of the south boundary of the C. O. FINLEY land (exclusive)."

* * *

During the night, the Commander of the 9th Infantry decided to regroup his two remaining battalions (the 3rd Battalion in the center had been ruled out leaving a gap between the 1st and 2nd). Consequently under cover of darkness he managed to withdraw his 1st Battalion from contact and moved it eastward to effect a junction with his 2nd Battalion which was still holding the high ground southwest of Phantom Lake.

In accordance with the new situation, the Cavalry Division Commander decided to attack the remaining infantry battalions southwest of Phantom Lake (1117-839.5) by ordering the 1st Brigade to move northeast on the Madera Springs road to fix the enemy frontally, while the 2nd Brigade was instructed to envelop the east flank and rear of the enemy position.

As a result of these instructions, the 2nd Brigade moved out shortly after 4:00 AM, via RJ 254; thence southeast around the hill mass southeast of RJ 254; thence north, crossing the Madera Springs Road just south of Phantom Lake. About one-half mile west of Phantom Lake the 7th Cavalry turned to the south and took a position about two miles south of Highway 290, engaging the infantry on the high ground southwest of Phantom Lake in a dismounted action. The 8th Cavalry moved about a mile farther to the west, then turned south along the general line Water Tank 181—RJ 254, in order to strike the withdrawing infantry in flank.

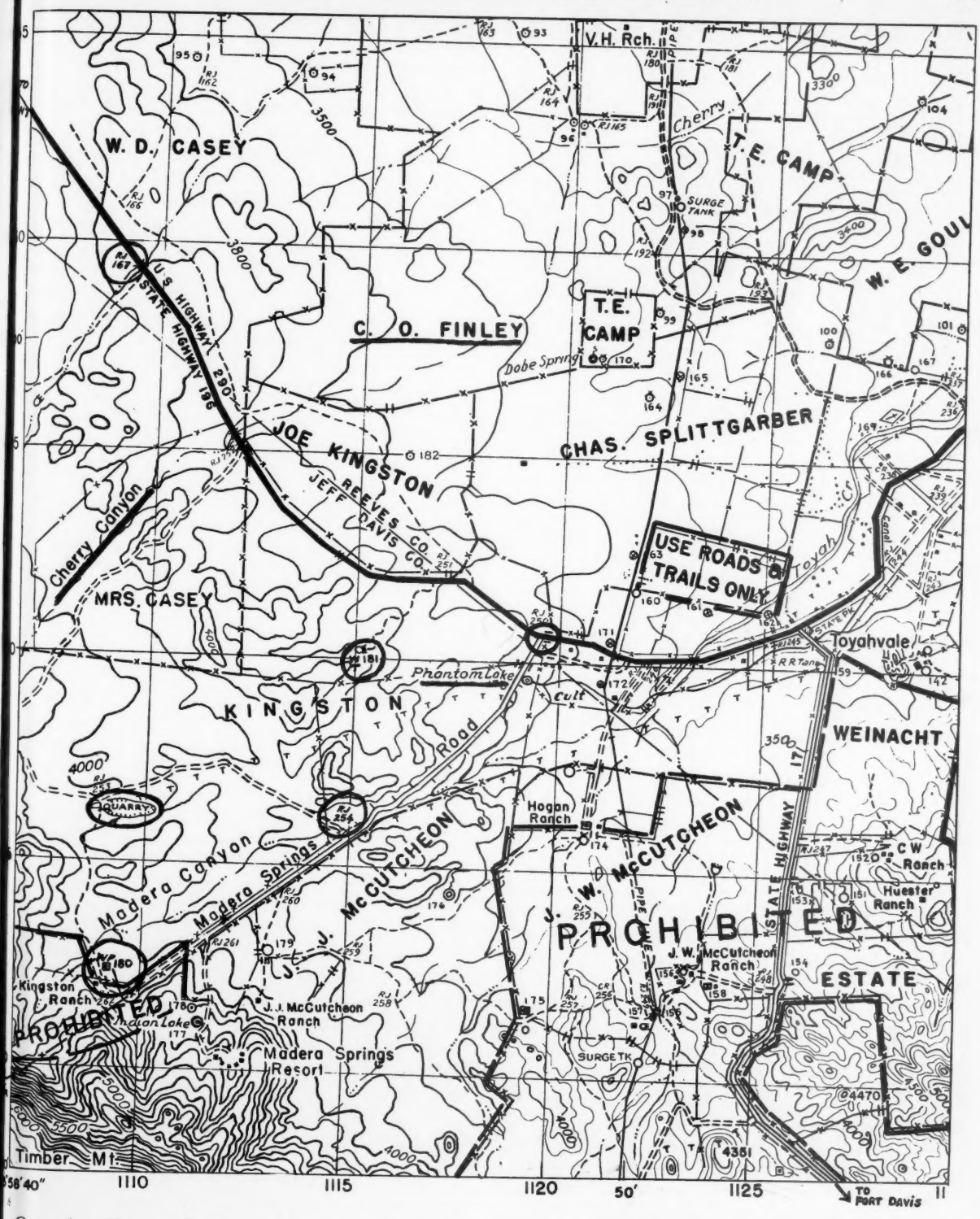
The 1st Brigade advanced astride the Madera Springs Road and executed a holding attack against the 9th Infantry position. The 5th Cavalry was on the right and the 12th Cavalry on the left of the road.

The 1st Brigade was pressing the attack when the maneuver ended at 10:35 AM, 27 October.

In general this completes a necessarily rather brief account of the operations of Phase IV. To attempt to go into greater detail would hardly be in the scope of this article particularly as the official records of the maneuver now being prepared contain a minute report of the same.

We shall therefore proceed to our conclusions which will sum up the tactical lessons brought out. Many of these points were emphasized in the critique given by the

Rough going



Corps Area Commander. Let us therefore terminate with their enumeration.

1. Mounted attacks appeared to be the rule rather than the exception. Against infantry heavily equipped with modern weapons, such tactics cannot be other than suicidal. Under such conditions, the only excuse for a mounted attack is when the enemy is completely surprised and can be so assaulted at close distance.

2. Mounted approaches practically ignored enemy weapons located within effective range. To attempt to approach mounted within six hundred yards of enemy machine guns and mortars over fire swept terrain is an

Motorcycle scout of the First Cavalry Division ready to defend himself when surprised on an observation mission.

absurdity of the first water. The use of collective cover and concealment was more or less ignored in both mounted and dismounted approaches.

3. Reconnaissance was rarely organized methodically by the Intelligence Sections of the various staffs. Every effort was made to substitute observation for detailed reconnaissance. Even at night, scout car reconnaissance was frequently substituted for horse patrolling. Obviously scout cars cannot replace horse patrols at night.

4. Security measures were largely neglected by many units. The most glaring example of this was the complete surprise of the division when taken in rear by the 2nd Battalion 9th Infantry. Every capability of the enemy must not only be considered but must be guarded against by adequate precaution. The division was well aware of the capability of the infantry to encircle its left flank and appear on its rear. This possibility was even discussed during the afternoon before. The only active step taken to counter this action however was to instruct the Engineer Squadron to demolish a bridge over a dry arroyo on the Fort Davis route without making an adequate reconnaissance to determine whether this destruction could be circumvented. This brings out very forcibly our next lesson.

5. Demolitions which are not covered by fire are worthless. Every road block, crater or other obstacle intended to cause delay must be defended by some sort of fire. Had this been done on the Fort Davis road, the infantry would not only have been long delayed but the division would have received precious information which would have enabled it to meet the threat.

6. There was a general inability to appreciate the greater power of the defensive over the offensive. Frontal attacks were therefore inadequately supported by fire and covered frontages far too wide for the units engaged.

7. Cavalry defense was generally too rigid and inelastic. A thin screen of machine guns could have amply performed the defensive rôle on the first delaying position while the rifle elements might have been grouped into a mobile reserve which could easily have neutralized the flanking threat of the infantry.

8. Aimless rapid movements tended to dissipate the reserve power of both horses and men. There appeared to be a tendency on the part of many officers to believe that the job at hand justified demanding the maximum effort on the part of horses and men with no thought as to possible future action. If such an attitude were taken under war conditions, the division would have been dismounted after a week's active operations.

9. Tactical operations seemed to obliterate thoughts of horsemastership and care of men. Watering, care of animals and feeding of men were frequently inadvisably neglected either because thoughts were focused on the tactical situation or because officers feared possible censure in the event the tactical situation changed during a time when they were engaged in these very necessary administrative functions.

10. Finally, but far from least, there was a surprising lack of initiative on the part of many officers to take the reins in their own hands and act in the absence of specific instructions. This was more apparent in the care of their organizations than in tactical situations. Nor were they altogether to blame. This condition cannot be corrected until our higher echelons of command realize the importance of fostering and encouraging initiative in subordinates. The latter should be praised whenever they take action requiring initiative regardless of whether this action as viewed by the superior is correct or incorrect. The German Army of 1911-1914 deliberately designed their tactical maneuvers to encourage subordinate commanders to violate missions—all in order to develop initiative. Until subordinate officers feel that they have the full unqualified support of their superiors in whatever action they may take on their own initiative, be it right or wrong, they will continue to await passively direct orders from these superiors before they will act in any sudden situation.

☆ ☆ ☆

THE GERMAN CAMPAIGN IN POLAND

By Lieutenant Colonel von Wedel

General Staff Corps, German Army

This article confines itself to an account of the military campaign in Poland during September, 1939. It must be left to history to pass judgment on the entire ramifications of these events.

On the basis of der Führer's directives the commanders in chief of the Army, Navy, and Air Force launched and conducted the campaign.

The Land Operations

In compliance with instructions issued by Colonel General von Brauchitsch, commander in chief of the Army, the operations of the German forces began at 4:45 A.M., September 1, 1939. Two groups of armies had been organized to carry out the operations:

(1) The Group of Armies of the South, under the command of Colonel General von Rundstedt;

(2) The Group of Armies of the North, under the command of Colonel General von Bock.

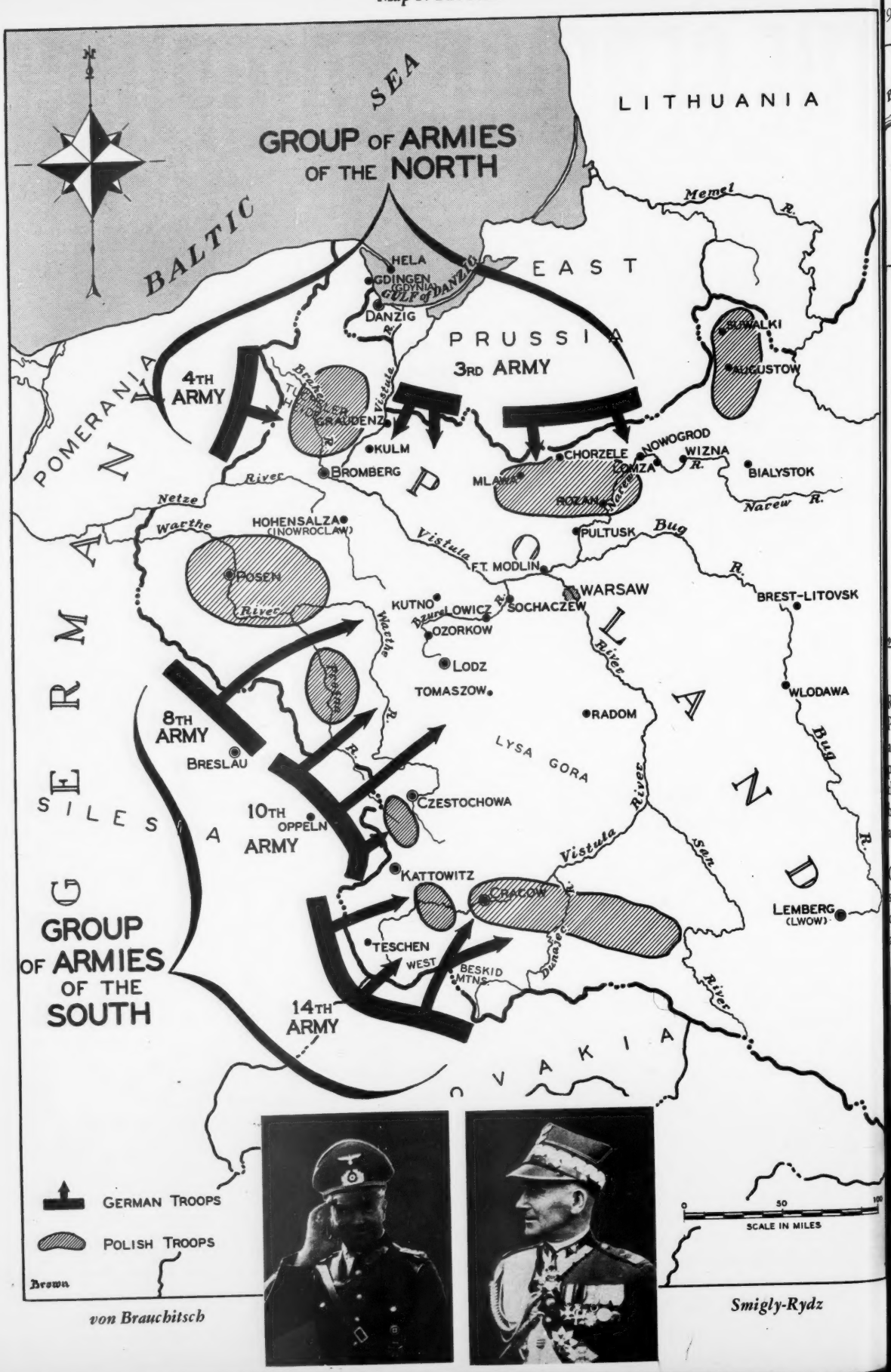
The southern army group comprised three armies: the Fourteenth Army, commanded by Colonel General List; the Tenth, commanded by General von Reichenau; and the Eighth, commanded by General Blaskowitz.

The northern group included two armies: the Fourth, under General von Kluge; and the Third, with General von Küchler in command.

The operations in Poland were designed to destroy as much as possible of the Polish Army in the territory west of the Vistula. Furthermore, by advancing the exterior flanks in the north and south so that they would extend to the country beyond the Vistula, the High Command intended to prevent from the outset any Polish attempt to establish a defensive line along the banks of the Vistula.

In a war which would find Germany engaged on two fronts, the Polish High Command had hoped to conduct a successful defensive until the support promised by Great Britain had taken effect. The Polish General Staff also intended to assume the offensive and defeat certain parts of the German forces on the Eastern Front.

Map 1: The Plan



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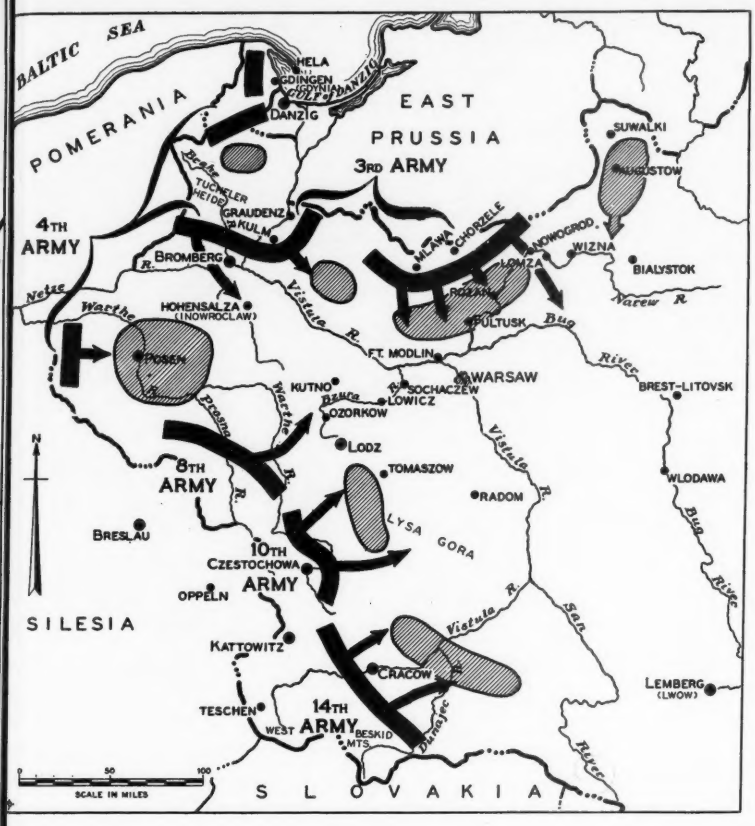


Map 2: September 4th

To support the concentric offensive on Danzig and East Prussia, the largest Polish army was closely concentrated in the region of Posen. The province of Posen protudes into German soil in the shape of a blunt wedge, flanking the southern boundary of the province of Pomerania and the northern limits of the province of Silesia. Should the Polish forces in Posen retain the initiative during the early days of the campaign, they would be a serious threat to the flanks of any German offensive launched from the directions of Pomerania and Silesia. However, the German attack developed with such rapidity that it took the Polish forces completely by surprise. Thus threatened in flank and rear, the Polish contingents in Posen were forced to withdraw to the east before they had a chance to put up any serious resistance. The Polish Army of the South was concentrated in the area of Cracow and Lemberg (Lwow). Certain elements were assigned the mission of establishing a line of defense near Kattowitz, in order to protect the vital industrial district of Upper Silesia. The mission of this army was defensive. The Polish High Command apparently believed the Army of the South and the units designated for the protection of the industrial region to be strong enough to ward off any German attack on this front, especially since the terrain in many places lent itself well to defensive action.

The Polish concentration took place in four armies. Resting on the strongly fortified line of the Narew, the Polish Army of the North concentrated its forces in the area between Lomza and Mlawa. German intelligence reports indicated that it intended to invade East Prussia from the south, simultaneously with an attack on East Prussia by another Polish force from the east—that is, from the approximate region of Suwalki and Augustow.

A second strong Polish army was concentrated in the Corridor. Its mission was apparently to take Danzig by surprise and subsequently to invade East Prussia from that direction, jointly with the attacks delivered from the south and east.

However, before the Polish High Command had a chance to convert its operations plan against Danzig and East Prussia into action, the German Army suddenly seized the initiative. The blow struck the individual Polish armies and the entire Polish dispositions in flank and rear and, from the outset of the operations, seriously

German infantry in combat formation on the edge of a town.

Map 3: September 14th

threatened the Polish lines of communications and railroads far in the interior.

The German operations developed as follows: Bavarian and Austrian mountain units of the Fourteenth Army, on the right of the Group of Armies of the South, shattered the stubborn defense of the Polish forces which were holding the passes of the West Beskids, and captured the line of fortifications extending on both sides of Teschen. Silesian and Austrian units penetrated the strongly fortified positions south of the industrial district of Upper Silesia after a brief but bitter fight. Keeping constant pressure on its opponent, the Fourteenth Army thrust the Polish forces across the Dunajec and the San. Cracow, Przemysl, and Lemberg were taken. The Tenth Army, composed of troops from all parts of Germany, took up the advance from the region east of Oppeln and pushed on to the Polish positions along the Warthe, after hard going through the border country which had been devastated. Overrunning the hostile front on the Warthe, the Tenth Army wiped out large Polish forces at Czestochowa and in the area south of that city. The army continued the pursuit into the region of the Lysa Gora and Tomaszow. An attack conducted astride the Lysa Gora blocked the retreat of Polish units that were trying to escape across the Vistula. Tank units penetrated the Polish lines at Tomaszow and headed for Warsaw, reaching the city by September 8. Within a week, the Tenth Army covered a distance of around 140 miles, as

Polish infantry en route to the front

Map 4: September 18th

the crow flies, notwithstanding strong resistance in certain sectors. Moreover, the Tenth Army destroyed strong Polish elements in the vicinity of Radom.

The Eighth Army, advancing from the region east of Breslau, overcame the delaying action of Polish forces along the Prosna and forced the crossing of the Warthe, a natural defense sector reinforced by permanent fortifications. In close pursuit, the Eighth Army thrust back Polish forces on both sides of Lodz, forcing a withdrawal in the direction of Warsaw. The army then occupied Lodz and took up a position on the Bzura, between Lowicz and Sochaczew. This operation blocked the retreat from Posen and the Corridor. As a result there developed a great encircling operation: the Battle of the Bzura. Desperate attempts on the part of the beleaguered Poles to penetrate the German lines failed with heavy losses.

A joint operation of elements of the Fourth, Third, Eighth and Tenth Armies, under the direction of the commanding general, Group of Armies of the South, led to the destruction of the main force of the Polish army at Kutno and in the country northeast of that locality, where the Vistula bends to the west. This battle resulted from the effort of the Polish army concentrated originally around Posen to retire to the east and to head off the German advance on Warsaw. However, the Polish operation failed owing to the speedy advance of the German Tenth Army and its earlier arrival at the Vistula.

This ten-day operation of the German armies is a picture packed with drama. Moving from the direction of Bromberg, the Fourth Army kept pushing the enemy to the southeast by way of Hohensalza (Inowroclaw), where the Eighth Army had already blocked all passages south of the Bzura. The Third Army, advancing from the north, closed the circle and frustrated the last hope of escape by way of Fort Modlin. Finally, in the east, divisions of the Tenth Army closed the vast circle at the gates of Warsaw—thus shutting off entirely the largest Polish army. The encircled Polish troops tried desperately to shatter the ring. An initial attempt to break through at Ozorkow ended in failure. The Poles made a final attack in a southeasterly direction, and German troops now had to show their mettle on the defensive. Meanwhile, the Eighth Army had cut off Warsaw from the west and southwest. Beginning with September 25, this army conducted the attack on the city from that front. Warsaw surrendered forty-eight hours later. The Fourth Army, as part of the Group of Armies of the North, invaded the Corridor from Pomerania, in the area north of the Netze, and moved in the direction of the Vistula to a line on both sides of Kulm. Following in the wake of a tank thrust, the army gained the western bank of the Vistula to establish contact with East Prussia within forty-eight hours after outbreak of hostilities. Pomeranian and Brandenburg infantry broke through the heavily fortified Polish positions on the Brahe. A battle in the Tucheler Heide (Tuchola Heath) resulted in the destruction and capture of several Polish divisions and a cavalry brigade. In the northern part of the Corridor, Fourth Army units simultaneously isolated the Polish port of Gdingen (Gdynia, recently renamed Gotenhafen) and captured it later in joint action with naval forces. After seizing the city of Bromberg and crossing the Vistula with remarkable speed, the army continued the advance astride the river in the direction of Warsaw.

Parts of the Fourth Army were successfully taking part in the Battle of Bzura, but the great mass of this army was sent to the German left wing. After having proceeded on Bialystok and Brest-Litovsk, they established communication near Mlodawa with troops of the Fourteenth Army which came from the south. So a second wide outer ring closed around the Polish Army.

The Third Army, advancing from East Prussia, joined West Prussian units in bitter fighting and captured the Prussian infantry broke through the strong fortifications fortress of Graudenz. In hand-to-hand combat, East at Mlawa and the Polish line of positions along the

frontier south of Chorzele. Heavy fighting ensued at Pultusk, Rozan, Nowogrod, Lomza, and Wizna, where the Third Army forced the crossing of the strongly fortified Narew. East Prussian *landwehr* regiments distinguished themselves in these engagements. Continuing its rapid forward movement, the army forced the crossing of the Bug and pushed on in the direction of the Warsaw-Bialystok railroad. Then the main body turned toward the north and east fronts of Warsaw.

The German armies gained their objectives in a remarkably short period of time. The commander in chief of the Polish Army departed for Rumania, without awaiting the final outcome of the military operations. The garrisons of Warsaw and Modlin surrendered September 29. The naval base at Hela was the last strongpoint to surrender.

Approximately 700,000 prisoners, some 40,000 horses, 1,600 guns, almost 8,000 machine guns, 500 grenade projectors, and 120 antitank guns fell into German hands, besides a wealth of other war materials.

The Air Operations

Two air fleets of the German Air Force, commanded by Generals Kesselring and Löhr, participated in the Polish campaign. The mission of these two air fleets was to conduct strategic air warfare in coöperation with ground forces as directed by the commander in chief of the Air Force, Field Marshal Göring.

The air fleets struck first at the Polish air forces and their ground organization. The aviation units bombed one airdrome after another, both west and east of the Vistula. Their bombs damaged and destroyed hangars, barracks, flying fields, and grounded aircraft. Other attacks were aimed at aviation plants, ammunition depots, and so on. The Polish antiaircraft artillery and pursuit aviation were unable to hinder these operations. By September 2, the air force had full control of the air over Poland.

Beginning September 3, the air force units were employed in an increasing measure against Polish lines of communication on the front and in the rear. They destroyed railroad lines and stations, bridges and roads. By preventing the reinforcement of Polish units and their movement from one part of the front to the other, the air force lent highly effective support to the advance of the German armies.

The activities of the air force contributed largely to the speed with which resistance was overcome in the Polish fortresses, especially Warsaw and Modlin.

In addition to this indirect support, the air force also lent direct support to the ground forces. Both bombers and fighters constantly attacked artillery positions, fortified zones, troop concentrations, and troops on the march or detraining or detrucking. Air-transport squadrons supplied the friendly ground forces with motor fuel, ammunition, and rations.

This continuous employment of the air force made high demands upon the flying personnel and the matériel, and that force coöperated efficiently with the ground forces throughout the campaign leading to a rapid success.

The Naval Operations

Units of the German Navy blocked the Bay of Danzig and so prevented any communcation by sea with Polish ports. Virtually all Polish naval forces in the Baltic were destroyed or captured. The German training cruisers *Schleswig-Holstein* and *Schlesien* supported the land operations by firing on Polish coast artillery positions located south of Gdingen and on Hela Peninsula.

Conclusions

When compared with the results, the German casualties may be regarded as small. In this connection, Chancellor Hitler stated in his address to the Reichstag October 6, 1939: "According to figures available September 30, 1939 —which will hardly be subject to any major changes—the casualties of the Army, Navy and Air Force, both officers and men, are: 10,572 dead; 30,322 wounded; and 3,409 missing."

The losses of motor transportation, tanks, and so on, likewise were small.

To what may the surprisingly swift success of German arms in the Polish campaign be attributed?

In addition to the remarkable performances of the German forces, it was the splendid coöperation of all arms and especially the close coördination of the land and air forces which contributed to the speedy and successful conclusion of the campaign.

The Polish soldier was tenacious, stubborn and brave; yet he failed because of the incompetence of his leadership and the shortcomings of his organization.

All arms shared equally in the successful operations. Their peacetime training proved its worth during attacks on hostile positions quite a few of which were strongly fortified. In addition to the rapid advances by the mechanized and motorized units, the infantry's accomplishments both in combat and on the march were outstanding. The crossing of rivers and streams confronted the engineer units with most difficult tasks, owing to the destruction of many bridges.

The German combat regulations, aimed as they are toward instilling self-reliance and initiative in the individual, were found sound in every respect. The German soldier also showed superiority in the field of close combat. That means a great deal, for in many instances the Polish soldier revealed himself an obstinate fighting man.

The equipment of the German soldier likewise proved to be entirely adapted to wartime conditions. Whereas in 1914 the equipment of the German troops necessitated modifications after the very first engagements, we can say today that the arms, ammunition, and equipment of all arms fully meet the requirements of modern war.

In the campaign the troops did not have to revise the tactics they had learned in peace. Their combat training satisfied the demands of war. That was especially true of the systematic training of the individual soldier in the exploitation of the ground and in camouflage.

Operations of a German Armored Car Platoon in the Pursuit of the Polish Army

By Lieutenant Colonel Truman Smith, Infantry

The following is the account of the operations of a German Armored Car Platoon conducted during the afternoon and night of September 16, 1939, in the area south of BREST-LITOVSK. The story was told by the Lieutenant and a Sergeant of this platoon over a German short-wave radio station on the evening of November 6, 1939. The unit was not identified by the speakers, but from mention of its garrison it is known to be one of the armored car companies of the third motorized reconnaissance platoon garrisoned in STAHNSDORF, ouside BERLIN. This is confirmed by other information to the effect that the Third Panzer Division, of which this unit is a part, was operating on September 16th in the vicinity of BREST-LITOVSK.

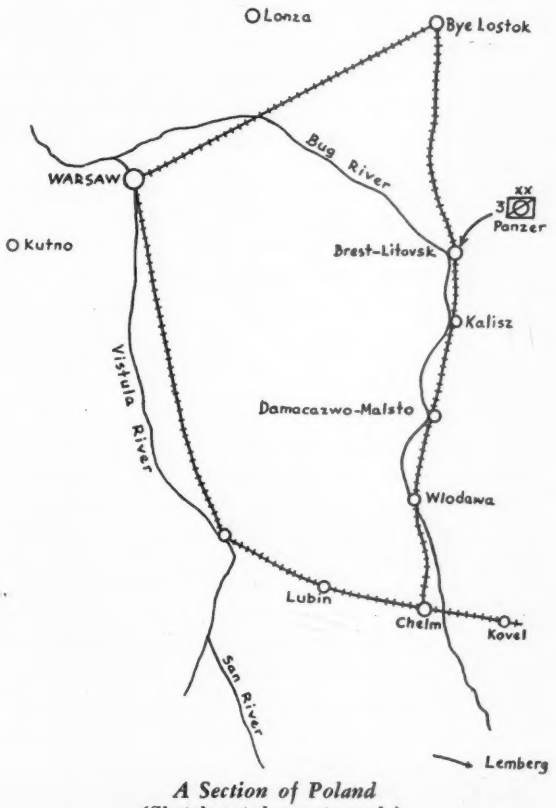
The German strategical situation on September 16th was as follows: Polish resistance had broken down over the entire front. The larger portion of the Polish armies were surrounded on this date near KUTNO and in the city of WARSAW. Coming from east Prussia, the Third Panzer Division and other German units had struck southeastward from LONZA and in an advance of unusual speed had reached BREST-LITOVSK on the 15th. The citadel of BREST-LITOVSK was still holding out on this day. South of WARSAW other German armies had crossed the VISTULA RIVER and were advancing on LUBLIN. In this area the Polish forces opposing the Germans had begun to disintegrate and were retreating in several isolated columns towards the BUG RIVER, which they hoped to cross to the south of BREST-LITOVSK. Far to the south in GALICIA German troops had already crossed the SAN RIVER and were advancing towards LEMBERG; the Polish forces opposing offering only slight resistance.

Story

The Lieutenant commanding the Armored Car Platoon stated that on noon of the 16th he received orders at BREST-LITOVSK to take his platoon and push southward on the west bank of the BUG RIVER towards WLODAWA and CHELM for the purpose of interrupting Polish east-west communications across the BUG RIVER. His platoon consisted of 5 armored cars, 3 of a heavy type and 2 of a light scout car model. The heavy cars were equipped with radio and were armed with a 2 cm. heavy machine gun and a light machine gun. The scout cars had 2 light machine guns each. There was attached to his platoon a Lieutenant of a pioneer battalion with 2 soldiers and a certain amount of demolition equipment. They left BREST-LITOVSK at about 2:00 p.m. and pushed southward towards the village of KALISZ, at which point there is a wagon bridge across the BUG RIVER.

In the village they found about 50 Polish soldiers, only half of whom were armed. No resistance was offered by the Poles who surrendered when called upon to do so. The Lieutenant left at this point one of his light scouting cars with orders to find some conveyances and take the prisoners back to BREST-LITOVSK. The wagon bridge across the river was found to have been destroyed by the Poles.

He then continued southward on the west bank of the BUG RIVER. At DAMACAZWO-MALSTO another bridge was found in a burned condition. Continuing southward he came, about 7:00 P.M., to the vicinity of WLODAWA. Here he found 2 bridges across the BUG; a wagon and a railroad bridge in good repair. He stopped his platoon and the Engineer Lieutenant and his men soaked both bridges with gasoline and set them on fire. While they were engaged in this work he heard a locomotive whistle to the south, indicating the approach of a train from the direction of CHELM. He at once directed his heavy armored cars to positions from which they could fire down the track. Within a few minutes a long train appeared from the direction of CHELM. The locomotive was at once engaged by the 2 cm. heavy machine guns of



A Section of Poland
(Sketch not drawn to scale)

the two leading armored cars. The boiler of the locomotive blew up after a few shots and the passengers of the train sought to get out as best they could on the side away from the armored car.

The lieutenant noticed, however, that at the rear of the train there was a second locomotive. He then directed the Sergeant commander of one of the heavy armored cars to move forward to positions from which this second locomotive could be put out of action. This was done and in the course of half a minute the second locomotive was blown up. A large number of soldiers now approached the armored car platoon with a white flag and offered to surrender. The Lieutenant, however, had no place to put them so after disarming them he told them they were free. He decided, however, to take two prisoners back to BREST-LITOVSK and forced them to ride on the running boards of two of his armored cars.

As it was now pitch black he decided to return to BREST-LITOVSK. This proved an extremely eventful trip. Twice during the return journey the platoon was fired at by Polish machine guns from ambush. The two Polish prisoners on the running boards were both killed. No anti-tank guns, however, were encountered and about midnight the armored car platoon arrived back at its unit at the outskirts of BREST-LITOVSK.

Comment

This little incident illustrates the possibility of the use of an armored car platoon in a pursuit phase of war when enemy operation has largely disintegrated and the opportunity is offered to small aggressive units to accomplish important strategic results. The destruction or damage of the two bridges at WLODAWA was in itself a strategic result of great importance to the German armies in that it burned to the retreating Polish army one of their main avenues of escape across the BUG RIVER. This strategic result was accomplished by a very small unit operating independently and much in the manner in which a cavalry demolition patrol would have acted in the past.

The distance covered by the patrol in 12 hours from BREST-LITOVSK to WLODAWA and back to BREST-LITOVSK amounted to approximately 120 km. (75 miles). This is far in excess of any distance which a mounted cavalry patrol could have covered in like time.

The lack of opposition offered by Polish detachments to this armored car patrol is probably indicative of the demoralization which affects all retreating armies. The Polish small arms were ineffective against the armor-plate of the armored cars and there were apparently no Polish anti-tank weapons in this entire rear area, hence the German Armored Car patrol escaped without casualties after the accomplishment of its mission.

It is also of interest that this armored car platoon found the roads in the Polish rear area undamaged and entirely passable for its vehicles. This is believed to be also typical of conditions in a pursuit when the pursuing troops have penetrated well into the rear areas of their enemy.

* * *

A Corrected Report

With reference to the demonstrations of new weapons which took place at the Aberdeen Proving Grounds on October 12th, the following remarks were noted in The *Washington Star,* October 13, 1939:

"To demonstrate its new weapons the Army yesterday used remote-controlled tanks of obsolete design as targets. Towing control wires which they unreeled as they went, these tanks lumbered across an open field. They first served as a target for a cavalry platoon from Fort Myer, Va., armed with 50-caliber machine guns, hitherto regarded as one of the most effective anti-tank weapons.

"The cavalrymen did their best. They sent a hail of heavy tracer bullets rattling like hail off the tank, which lumbered on, narrowing its range from 500 to 250 yards, when it had to be stopped by remote control, quite undamaged and entirely able to continue. Officers revealed that in previous tests this same tank had been hit 2,000 times with 50-caliber machine gun bullets out of 10,000 rounds fired and never had been stopped, except by cutting the control wires trailing behind it."

This report was most complete with the exception of the omission of the statement that modern armor piercing ammunition was not being used.

Accordingly, the following day this report was published:

The War Department's Ordnance Bureau yesterday came to the defense of the .50-caliber machine gun as an effective weapon against modern tanks and armored cars.

Some news reports of the recent demonstrations at Aberdeen proving ground stressed the fact that the fire from the machine guns was unable to stop a robot tank.

"This is an entirely erroneous conclusion," ordnance officials said. The firing at Aberdeen proving ground by a cavalry unit equipped with the .50-caliber machine gun was entirely for demonstration purposes, they explained, and no armor-piercing bullets were used. "It was considered that the demonstration very effectively accomplished its purpose," a statement read.

Tracer ammunition only was used, it was explained, so that the spectators could obtain a vivid picture of the high rate of fire and accuracy that could be developed against a rapidly moving tank. Armor-piercing bullets were not fired, it was said, to avoid the great damage and possible destruction of vital parts of the tank.

The .50-caliber machine gun was developed several years ago as a principal weapon against tanks. Because of the use of tracer bullets, which cannot pierce armor, ordnance officials discount the claim that the tank used in the demonstration "proved itself invulnerable to this weapon."

The Diesel Engine

By ARTHUR F. OCHTMAN*

What is a Diesel Engine?

About forty-five years ago Dr. Rudolph Diesel succeeded in building and operating an internal combustion engine of a type which eliminated any outside means of ignition. Ignition was obtained by heat resulting from compression of air in the cylinder.

We all know that compressing air generates heat. Thus, an air compressor must be either air or water cooled. The higher the compression is carried in pounds per square inch, the higher the heat generated.

This plan of heat generation was employed in the Diesel engine. The compression of the air in the cylinder by the piston on the compression stroke was made high enough to result in an air temperature that would ignite fuel either in a powder or liquid spray form.

The general construction and design of the engine is similar to that of a gasoline engine, except that the latter operates on low compression, using a separate form of ignition, usually a high tension spark from a magneto, or distributor and battery.

A general comparison of the two types of internal combustion engines follows: taking the popular four stroke cycle types as examples, which are most widely used today:

Diesel Engine

1. Suction stroke.—Air is taken in through the intake valve on the downward suction stroke.
2. Compression stroke.—The air is compressed as the valves are closed on the upward compression stroke. Near the top of this stroke fuel oil is sprayed under high pressure into the compressed air above the top of the piston, and is ignited by the heat generated during compression.
3. Power stroke.—The expansion of the burning fuel oil and air mixture pushes the piston down.
4. Exhaust stroke.—The exhaust valve opens and the momentum in the flywheel carries the piston up again, pushing the exhaust gasses out of the cylinder, ready for the suction to start again on the next cycle.

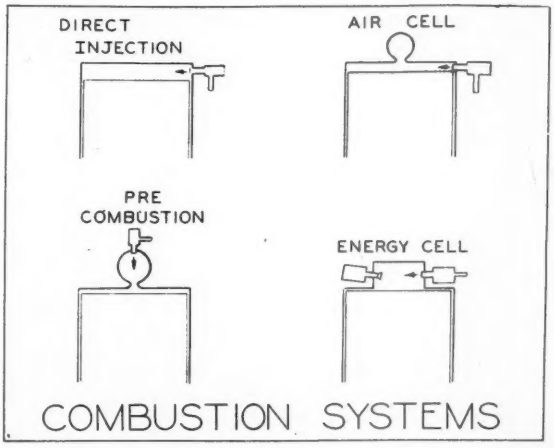
Gasoline Engine

1. Suction stroke.—A mixture of air and gasoline is taken in through the intake valve on the downward stroke.
2. Compression stroke.—The mixture is compressed as the valves are closed on the upward compression stroke. Near the top of this stroke a spark plug ignites the compressed mixture.
3. Power stroke.—The expansion of the burning mixture pushes the piston down.
4. Exhaust stroke.—The exhaust valve opens and the momentum in the flywheel carries the piston up again pushing the exhaust gasses out of the cylinder, ready for suction to start again on the next cycle.

Types of Diesel Engine Combustion Chambers

As the requirements for different applications of Diesel engines became known, suitable engines to handle these jobs had to be developed. This called for improvements in the injection of fuel and in the shapes of combustion spaces in which the mixture was burned.

The following diagrams cover four types of combustion systems used on Diesels:



1. The direct injection type is arranged like a gasoline engine having one combustion chamber above the top of the piston. The injection nozzle replaces the spark plug and fuel oil is sprayed directly into the one chamber.

2. The air cell type is like the direct injection except there is a separate small auxiliary chamber leading into the main chamber. Air is compressed in the chamber the

*Executive Engineer, The Buda Company.

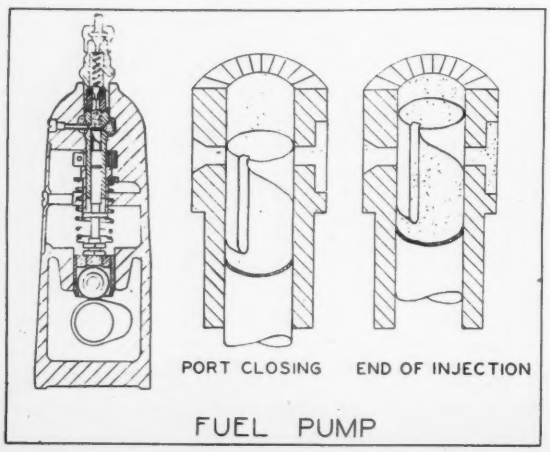
same as in the main combustion space on the compression stroke. On the power stroke this air is released when the pressure in the main chamber is less than that of the air cell, and the air rushing out creates a turbulence that aids in more complete combustion.

3. The precombustion type is a modification of the air cell type, except that the injection nozzle is placed in this cell instead of in the main chamber. In this type, combustion starts in the cell and the expanding gasses go out into the main chamber.

4. The energy cell type differs from the others in that the injection nozzle is placed in the main chamber on one side and a cell is placed on the other side opposite the nozzle. The cell has a small funnel shaped opening or venturi leading into the main chamber. When injection takes place the solid core or center part of the spray enters the venturi of the cell and is ignited in the usual way. Due to the small opening in the cell, the pressure within is built up rapidly. As the piston starts down on the power stroke, the expanding-burning gasses rush out of the venturi into the main chamber. Due to the peculiar shape of this chamber the gasses mix with the portion of the fuel spray left after injection, and are completely burned, due to the excellent turbulence.

Many engineers prefer the energy cell principle described in No. 4. This system has two decided advantages. First: due to delayed combustion action of the energy cell releasing its power to the main chamber, the peak pressure does not occur until after the piston starts down on the power stroke, thus eliminating excessive pressure and pounding action on the bearings. Second: the venturi of the cell holds back the pressure of the burning fuel so that it is not all released at once. This results in maximum combustion pressures on the piston being much lower than with the other types of combustion. Then we have what is called "Soft" or quiet combustion with less pressure and pounding action transmitted to the bearings.

Another advantage of this energy cell system is that piston temperatures are held lower and more even over the top of the piston, resulting in even piston expansion and lack of piston ring difficulties.

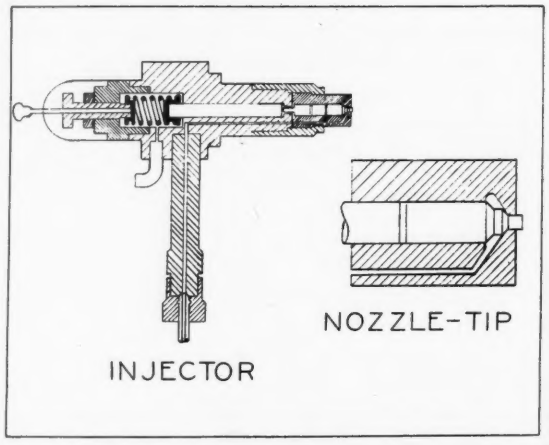


Fuel Injection Equipment

The high speed types of Diesels employ what is known as "Solid injection." Fuel oil is pumped by a high pressure plunger pump at a pressure of two thousand or more pounds per square inch, through a nozzle into the combustion chamber. This pump acts as the timer also, starting and stopping injection at the right moment. This governs the amount of oil injected. The amount of oil controls the speed of the engine, which is taken care of by a hand throttle or governor. The following diagram shows the cross section of a typical fuel injection pump. This shows a view of the mechanism for one engine cylinder.

The two enlarged views show the plunger of the pump in the barrel in two different positions. The curved portion of the plunger has the important functions of timing the injection and regulating the amount of fuel injected. This plunger, one to a cylinder, can be rotated through part of a circle so as to govern the amount of fuel injected. The stroke of the pump is always the same, and the excess fuel is led back into the system. There is one stroke of the pump for each injection.

The injector most commonly used is the "pintle" type. This is illustrated in the diagram below:



The small "pintle" which is shown in the large section of the nozzle tip is a valve held in place by a heavy coil spring. This spring tension is set by an adjusting screw so that the pintle will pull back and open the hole in the nozzle tip when the fuel pumped by the injection pump reaches the pressure that is required. As soon as the pump stops injection, the pintle snaps back onto its seat and closes the hole. This type of injection is reliable and self cleaning.

Advantages Over Gasoline Engines

A high speed Diesel engine has approximately the same weight per horsepower as a similar type gasoline engine.

The Diesel, however, has the following advantages:

1. No electrical ignition to cause radio interference on airplanes, or in vehicles.
2. Elimination of fire hazard.

3. Greater lugging ability when heavy loads are applied suddenly.
4. Lower fuel consumption.
5. Cheaper fuel used.
6. Fuel not subject to as much loss through evaporation.

Field of Applications

In the early days of the Diesel, heavy slow speed engines were all that had been developed. These were suitable only for marine and stationary use.

The Diesel today, however, is developed to a point where it may be built to operate at practically the same speeds as the gasoline engine and weigh but little more, for the same power. This has opened up a wide field of application, due to the many advantages, such as better lugging ability, fuel savings, elimination of fire hazard and greater dependability.

Following are a few of the interesting applications:

Trucks

Most truck manufacturers, realizing the demand, are offering Diesel models, as well as gasoline types. For long distance hauling or where trucks are used many hours of the day, the savings in operating costs are remarkable. The average Diesel truck will carry its pay load about twice as many miles on a gallon of fuel as a gasoline truck of the same power. The average cost of Diesel fuel is about half that of gasoline, counting a road tax on both fuels. Thus, the cost of fuel per mile travelled by the Diesel truck will be about ¼ of the cost, when operating with gasoline.

The Diesel truck will take the load through hilly country faster than the gasoline type, due to the better lugging characteristic of the Diesel engine under heavy loads.

In case of an accident on the highway, there is little chance of the Diesel truck catching fire, which is so common on the gasoline model, as the fuel is hard to ignite by ordinary means.

For Army use the Diesel truck is ideal. The most important factors being the elimination to a great extent of the fire hazard. Picture a fleet of trucks, with supplies, going across country under shell fire. A punctured gasoline tank would either cause an explosion or a serious fire, destroying the truck and contents, possibly together with other trucks close by. If it were a Diesel fuel tank that was punctured, there would be no explosion, and but very little chance of fire.

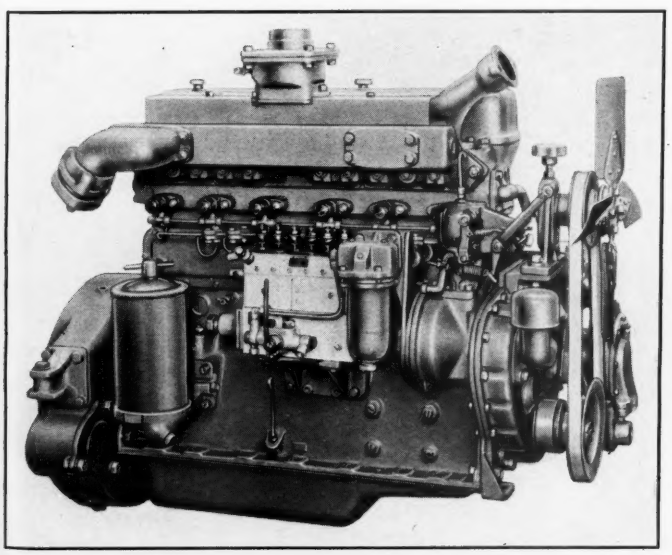
The Army truck must obtain its supplies of fuel, either along the route, or from tank trucks. In the case of the Diesel, the truck can travel twice as far, without a refill of the fuel tank. To handle a whole fleet of Diesel trucks moving across country, there would be required only half the supply of fuel needed for the gasoline type.

Army Tanks

Considerable development with excellent results has been conducted by the U. S. Army with Diesel equipped tanks, during the past 3 or 4 years. This type of vehicle requires a lot of power in order to move its weight at high speed. The tank must be as small and compact as possible, with as much useful internal space as can be provided. In the conventional engine, either in Diesel or gasoline type having the required horsepower, much useful space is taken up with the power plant. By using the radial type of engine, the engine compartment can be made about half as long as when using engines having cylinders in line or "V" type.

By the use of air cooling, a great hazard has been overcome. The tank must traverse very rough ground and it will be difficult to mount a large radiator and keep it from leaking as a result of the vibrations. The tank is also under fire and while the radiator is protected by steel plates, to some extent, there must be ventilation. Damage and loss of the cooling liquid may result, spelling failure, possibly at the time the tank is most needed.

By the use of the radial Diesel air cooled engine for the tanks, a number of favorable factors are obtained. First: the fire hazard is eliminated. The fuel will not explode or ignite, if the tank is overturned. There is very little chance of the fuel igniting if the fuel tank is damaged by shell fire. Second: The vehicle will be able to operate about twice as long on one filling of fuel, as compared to the gasoline type. Third: There will not be any radio shielding required to prevent radio interference from electrical ignition. Fourth: The accessories are less complicated and delicate on the Diesel, with less chance of jarring loose, as there is no ignition equipment. Fifth: The tank may travel through streams with the engine well covered with water as there is no ignition to drown out. The tanks using gasoline engines must seek shallow water or a bridge of some kind before crossing a stream. The Diesel tank can move through water at high speed as deep as the driver can negotiate, and still have his head above water. Sixth: by use of the

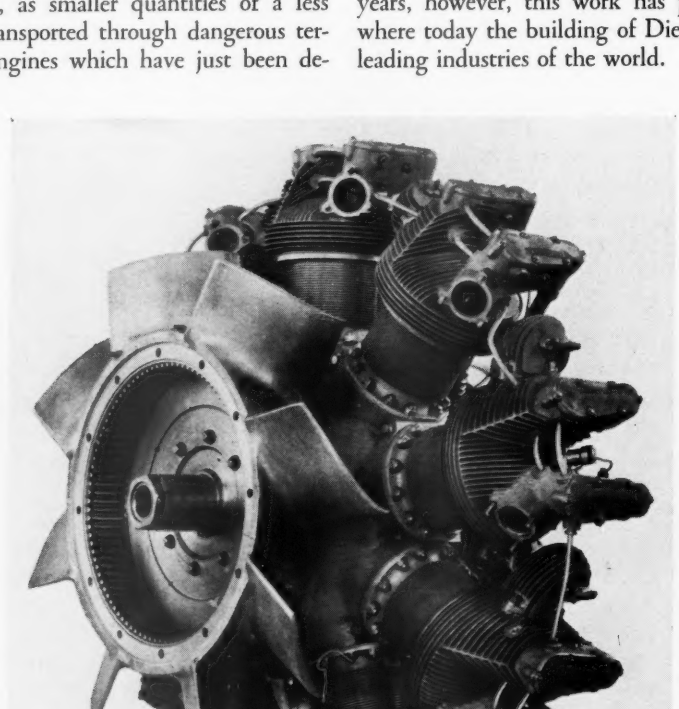


Diesel Truck Engine

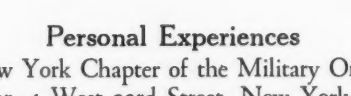
Radial type of Diesel, the tank will be shorter and a smaller mark for enemy guns.

Scout Cars

Many of the same comments in favor of the Diesel, as outlined before, will fall true with this class of vehicle also. Inasmuch as the use of Diesels in Army trucks and tanks is already here, it is only natural the other types of mechanized equipment will follow suit. This will simplify the fuel problem, as smaller quantities of a less volatile fuel need be transported through dangerous territory. The types of engines which have just been described cover broadly the general design used in other applications, such as locomotives, tractors, airplanes, earth-moving machinery, pumps, hoists, air compressors and oil well drilling machinery. The engines for these pieces of equipment may have a different arrangement of accesories and other forms of mounting to suit the particular applications. The Diesel engine has undergone rather slow development during the first twenty years, since Dr. Diesel started his experiments. During the last twenty years, however, this work has progressed very rapidly, where today the building of Diesel engines is one of the leading industries of the world.



Diesel Tank Engine



Personal Experiences

The New York Chapter of the Military Order of the World War, 4 West 33rd Street, New York, is undertaking the project of accumulating a wide collection of personal experiences during the World War. In compiling this history they desire written anecdotes covering any stories, incidents, episodes which any military man may recollect and be kind enough to forward to them.

Russian Cavalry

EDITOR'S NOTE: These comments on Russian Cavalry are reprinted from *Military Strength of the Powers* by Max Werner. A review of this interesting volume, published in July, 1939, appeared in the September-October issue of THE CAVALRY JOURNAL.

German military literature has been proclaiming the resurrection of cavalry for some time now. Leading German military experts, General Brandt, General von Kockenhausen, and General Poseck, and the *Militar-Wochenblatt* itself are never tired of declaring that the epoch of motorization can and must resuscitate that honourable arm. Two conditions are put forward for the use of cavalry in modern warfare:

Cavalry must be used in great masses and not in small formations; and

Cavalry must be equipped with the latest weapons of modern warfare, and trained to coöperate in particular with tanks.

This German army thesis has been developed from the daily practice of the Red Army. What German military experts recommend in theory has been put into practice by the Red Army. In the civil war cavalry played a big rôle. Budienny, the Red cavalry leader during the civil war and later their Inspector-General, writes:

"Throughout the whole civil war two characteristic tendencies were observable in the use of the cavalry arm:

(1) an effort to use cavalry in masses; and

(2) the use of strategic cavalry for decisive aims."[1]

Cavalry is one of the most important offensive weapons of the Red Army. One can say, in fact, that today the Red Army has a monopoly of the mass use of cavalry under conditions of modern warfare. With its *34 Cavalry Divisions* in peace-time with 2 to 3 Brigades of 2 Regiments each, Soviet cavalry is stronger than the cavalry of Germany, France, Poland, Italy and Japan together. Whereas in the West, in Great Britain and France, cavalry is well on the way to being completely unhorsed and turned into lightly motorized formations, massed cavalry remains in full existence in the Red Army and it retains its own special tasks. Whereas in Poland, which has the second strongest cavalry army in Europe, cavalry represents a stubstitute for motorization, in the Red Army it represents a supplementary arm for use with motorized units.

Red cavalry has a double purpose:

It is used as an independent arm for offensive purposes, and in this case it is used as the core of the troops with which it coöperates. Field Service Regulations 1934 declare:

"Strategic cavalry with its considerable strength in arms and technical equipment (machine-guns, artillery, tanks, armoured cars, and aeroplanes) is well able to carry out various tasks in battle (attack, defense, reconnoitering, raids) independently."

This idea has been expressed still more clearly in Soviet military literature:

"In future wars cavalry will be given very responsible tasks to perform. Cavalry formations strongly supported by aeroplanes, tanks and armoured cars will have operative-strategic tasks to perform: wide encirclement of the enemy, and the capture of his most important strategic, economic and political centres—as well as tactical tasks: the final disorganization and destruction of retreating and defeated enemy troops."[2]

This was the case when the army of Deniken was destroyed in the civil war, and it was also the case during the Russo-Polish War when the chief forces of the Red Army on the South-West front consisted of cavalry supplemented by weak infantry formations, and of course at that time on a low technical level. Today the Red Army has much greater masses of cavalry ready for action and they are equipped with the last word in military technique. Such masses of cavalry represent a very powerful offensive weapon in the territorial conditions of Eastern Europe. The prominent Soviet military theoretician, Svietshin, points out very correctly:

"Cavalry has not an intrinsic value, but one related to the territorial conditions in which the war is fought and in which cavalry will have to operate."

During the autumn maneuvers in West Russia in 1936 there was one phase of the struggle in which cavalry appeared as the core of an army, supported by tank units and aeroplanes, and a new combination of arms for future warfare became evident. Together with tank units and motorized infantry, the Red Army has powerful cavalry formations, a highly mobile weapon for an offensive blow or for maneuvering.

At the same time cavalry in the Red Army is trained to coöperate closely with tanks, and it has its place in the decisive operations of the powerful moto-mechanized units. It is the task of cavalry to follow up tank attacks, to occupy captured territory and mop up isolated enemy posts. It must never offer a good mark to the enemy, it must be highly mobile and be used against the man-power of the enemy whilst the tanks are destroying his fire concentration. In such a combination of arms the operation of pursuit can be carried out rapidly and with all energy, and the exploitation of successes can be carried out at top speed.

The Soviet Commander Krivoshein writes as follows in a book which was translated into German and created a sensation in German military circles, which regard it as a pioneering effort in the tactics of modern warfare.

"Just as for cavalry, the pursuit of a defeated enemy is one of the most fruitful tasks of mechanized troops. The great mobility of cavalry is supplemented by the impetus and maneuvering capacity of the tanks, and therefore a mixed formation of cavalry and mechanized troops represents a very effective instrument of pursuit."[3]

The Red Army has rehabilitated the cavalry; the rider of the plains now takes his place, with modern equipment, side by side with the mechanized unit.

[1]Budienny, "Red Cavalry," in the *Bolshevist,* No. 4, 1935, p. 38.

[2]*Voina i Revolutsia,* September-October, 1933.

[3]Krivoshein, "Taktik schneller Vergande," published in a German translation by the *Voggenreiter-Verlag,* Potsdam, 1934.

Little Phil

PART II

The VI Corps took up the charge.

By Fletcher Pratt

Illustrated by HOWARD WILLIAMSON

When the word came Sheridan had moved a little up the Valley to Berryville. Early was camped west of him, before Winchester in a position where several roads came to a nexus among some jutting heights. Stonewall Jackson had won a battle there in '62; perhaps the Confederate commander felt it a place of happy augury to his side. Sheridan, who had visited the town during the early days of his Valley command, thought it radically defective as a military post, refused to put his own army there, and now planned to crush Early in it. At one o'clock in the morning of September 19, the men were roused from their beds, given a meal and hot coffee; at two, the whole army marched. Early had been moving his forces restlessly about during the previous days. Sheridan hoped to strike Winchester while only two of Early's four divisions were there, but planned to inflict a Leuthen on whatever he did find. The main road from Berryville to Winchester, a good metalled highway, runs for three miles through a narrow ravine, then crosses a little belt of plain country and mounts a low plateau, at the far side of which stands Winchester town, with the abutments of Little North Mountain soaring up behind it. A series of tracks, passable for infantry but not much else, roughly parallels the road through the hills south of the ravine. There are more hills, broken and knob-like, north of it, reaching to the very foot of the plateau before Winchester.

The rebels had a fort at the outlet of the ravine, and their camps lined the plateau behind it, which was not quite high enough to afford a good view over the hills, nor did they have any force out in those hills.

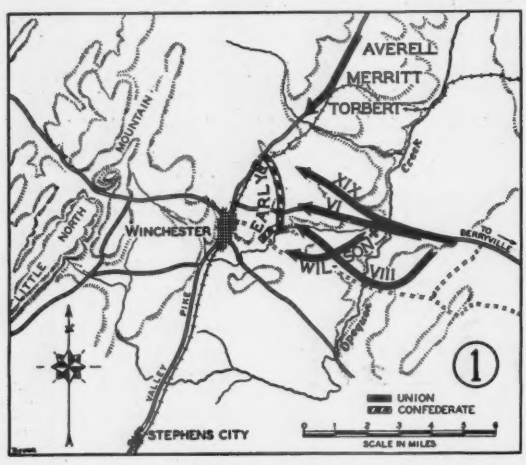
Sheridan's orders put Wilson's cavalry division at the head of the advance. This officer was to use his mobility to the full; as soon as he found himself within the walls of the three-mile-ravine press on at the gallop to seize the outlet fort, the only real danger to the movement. Behind Wilson, Wright's VI Corps was to march through the ravine to the edge of the plateau, attack and fix the Confederates there, while Wilson covered their left flank, filing off into some flat country southeast of the town. (See Map 1.)

The XIX Corps would follow the VI through the ravine, swing right around the foot of the plateau and deliver an oblique attack on the left wing of the rebels as they faced Wright. Meanwhile the VIII Corps would take the mountain tracks south of the ravine, strike in between Wright and Wilson on the right wing of the Confederates. Torbert with the division of Averell, which was already north of Winchester, and that of Merritt, which left during the night to join Averell, was to come down the main Valley Pike on the Confederate left rear into the town. It was a combination attack, but one that stood in no debt to time, which makes combinations fail: for Sheridan's main body would be always under his hand for a change of assignments. In fact, all accidents were provided against but the one that occurred after Wilson went galloping up the ravine with the first false dawn behind him, and dismounting his men, stormed the fort. General Wright, that capable but formal soldier, marched on behind Wilson to deliver a surprise attack with his full equipment of ambulances, wagons and baggage following the infantry. With break-downs and bunchings this transport jammed the road through the ravine; the XIX Corps could neither pass nor speed up (Map 2). It was already noon and the VI engaging the whole rebel army in a fire-fight of the most murderous character when Sheridan in person discovered what was wrong, ordered the teamsters to "get those damned wagons into the ditch" and brought the XIX Corps to the field.

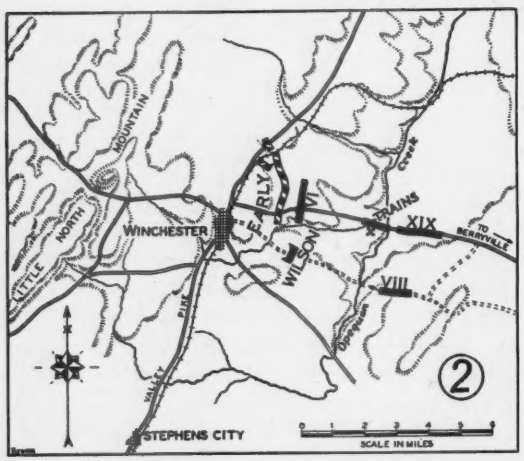
Now it was too late for them to oblique onto the Confederate left. Early had every man up; as the XIX Corps began to reach the field, he flung forward a storming column under his best officer, Rodes, against the right of the VI. One of Wright's brigades went; the attack rushed on till it was halted by a battery of heroes from Maine, who stayed to shoot things out—unsupported artillery against foot. They gained time enough for the XIX to reach the line, marching and firing across the rebel front, both sides suffering heavily in that open ground where there had been no time to take cover—suffering so much that by one o'clock the battle had sunk to a lull along parallel lines.

But one o'clock brought Crook and his VIII Corps. Boldly changing plans in the middle of action, Sheridan switched it across the rear of his front around the foot of the plateau to the right of the XIX, through the hills. Crook got his artillery onto a commanding eminence from which it would enfilade the rebel line. At three he delivered the attack meant for Emory under cover of the sudden, surprise fire from these guns. Among the Confederates Gordon's division was broken and driven in, the

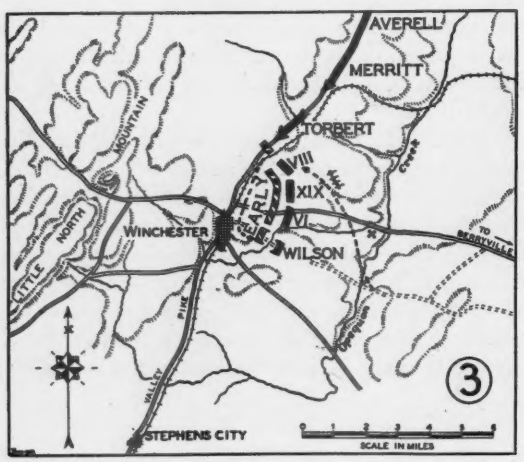
He ended the day of Napoleonic cavalry



Map 1: Winchester. Sheridan's attack plan.



Map 2: Winchester. The plan miscarries.



Map 3: Winchester. Situation at 4:30 p.m.

XIX and VI Corps took up the forward movement and it was only some distance back that Early managed to re-establish a right-angled line at 4:30. (Map 3.)

And now he found himself in still deeper trouble. Young Wilson had gotten his cavalry division into the saddle again after Wright took over the fort from him in the morning. All day now he had been circling through open ground south of Winchester, great masses of horsemen in full view but beyond gun-range of Early's men, reaching for their strategic flank, his action the perfect pattern for that of a motorized division. In the fog of war where decisions must be based on a glance, Early assumed that this was the whole Union cavalry force. He switched his own cavalry to fend it off, had nothing left to cover the left flank that was floating in air on the Valley turnpike when just at 4:30 Torbert came riding in at the head of five thousand horsemen.

As they appeared the Union men set up a whoop. Crook charged, Emory charged, Wright charged, the Confederate line was carried right away. "It was sad, humiliating, disgusting; I never saw our men in such panic before," wrote a Confederate officer who was in the wild rout that went tumbling through Winchester in the fading light. "God bless you," telegraphed Lincoln to Sheridan; for a moment all the voices of politics were stilled as this morning star of victory rose in the North, the brighter because it shone on the Valley, Stonewall Jackson's Valley, the rebels' great road of war.

That night Sheridan sent his tired, happy men to early rest. Next morning he had them on the roads with day. At Strasburg, where the Massanutten chain juts forth to split the Valley into twin tunnels, Early had taken his stand. The eastern half of this double Valley has bad roads and few from here south. Against an army it is necessary only to watch the other gap, and right across this behind Strasburg cuts a deep gorge whose rocky sides are ill work for even an unarmed man to climb, its western beginning being back among the folds of Little North Mountain. Early held a promontory on the far side of this gorge, called Fisher's Hill, and thought the position so strong that he sent his gun limbers to the rear.

On the night of September 20th Sheridan was already in Strasburg and had formed his plan of attack. As the Union troops filed in that evening the VI and XIX Corps were brought up with much parade and skirmishing to take position facing Fisher's Hill across the gorge. The VIII Corps, last in line on the roads, by Sheridan's order delayed its arrival, then came by a long circuit, concealed behind hills from the Confederate signal stations on the Massanuttens. Crook did not join the other corps, but made for the slopes of Little North Mountain. (Map 4.) It is all forest there; the VIII Corps men kept well back among the trees, scrambling all day of the 21st and 22nd among the slopes and around peaks till they reached a position, still in woods, behind the Confederate left rear. Even their weapons were wrapped in rags to hide the gleam and clang.

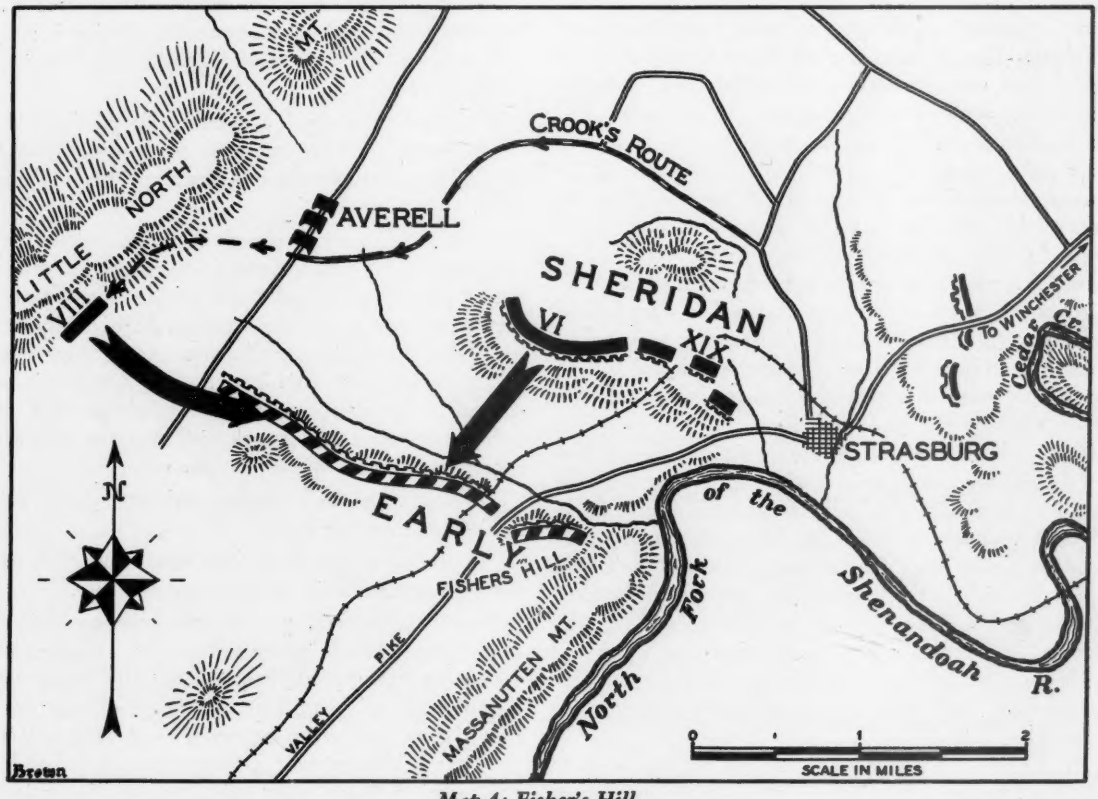
Along the side of Little North Mountain, past the front

where Crook's men lay concealed, runs a narrow road. Well back on it Averell's cavalry division was massed to draw the Confederate left as far forward as possible, and to ride in behind Crook after he had delivered his blow. Torbert meanwhile, with the divisions of Merritt and Wilson, was hurried forward up the road of the eastern Valley through Luray, a forty-mile march which only cavalry could make at speed. He was to get across the Massanuttens where they flattened at their lower end, seize New Market in Early's rear, intrench it and hold there. This march was the reason for delaying the main attack; Sheridan meant to make a clean sweep.

By evening of the 22nd September the cavalry had been given three days for its forty miles. The day had been spent in inconclusive skirmishing and artillery discharges around Fisher's Hill. The rebels were gathering round their campfires for supper in very good heart when the sun went down. It was the signal; through the long shadows that stalked across the valley, eleven thousand men of Crook's command dropped from heaven on the rear of the Confederate line. A shout went up, "We are flanked!" They broke, then began to run. The VI Corps took up the charge, scrambling across the wall-like ravine, with Sheridan in the middle of them, shouting "Forward everything! Don't stop! Go on!" whenever anyone asked him for instructions. Everything went forward; in the brief space between sundown and dark Early was driven in rout with the loss of part of his artillery and a big haul of prisoners.

The verdict of Winchester was confirmed. The North went wild with delight, and hundred-gun salutes were fired from every military post, but to Sheridan it was his most unsatisfactory battle. He had planned for destruction; he got only victory. Down the Luray Valley Torbert had encountered an insignificant Confederate force in an intrenched position. He was a good officer, but in the old style; though he had seen it at the Wilderness, the new tactic of cavalry charging on foot meant nothing to him. He kept his men in the saddle, uselessly jigging around, till the opportunity passed. At Fisher's Hill itself Averell committed an even worse fault. He waited respectfully for the infantry to clear the road ahead of him, and when they had not entirely done so by dark he went into camp. Sheridan instantly relieved him and gave the division to Custer.

Early meanwhile, was given no chance to rally. The infantry pursuit held so hot to his heels he was driven to the limits of the Valley. Washington, supported by Grant, wanted Sheridan to follow on and make a campaign against the rear of Richmond, but the latter turned this idea down—it meant long communication lines without any railroad support. Through the next three weeks, therefore, he moved slowly back north, burning out the ripe grain, driving off animals, and answering all protests by



Map 4: Fisher's Hill.

the bland statement that loyal citizens could bring claims against the Federal government.

II

His operations had caused as much consternation in the Confederacy as delight in the North. It was impossible to repair the physical damage the Army of the Shenandoah had caused, but for the moment this was less important than the question of morale to Lee and the Confederate high command. Desertions were rising at an alarming rate; the men needed the stimulus of a spectacular victory, preferably one that would severely punish Sheridan, since his was the only one of the Union armies that had gained clean-cut wins in offensive battle. Moreover, his work in the Valley was done; the Confederacy was not ignorant of the reports that the bulk of his forces would be returned to Petersburg.

It was thus that Lee came to detach Longstreet's corps to Early for one more drive down the Valley, the last and greatest. They made a long, fast march. At 3:30 in the morning of October 19 they were on high hills from which they could look down into the sleeping Union camps along the line of Cedar Creek, just north of Strasburg. At four o'clock a clinging mist hid everything a hundred yards away; at five the rebel yell went up and an attack from three directions at once struck the horseshoe circuit of Union camps. (Map 5.)

We may be sure that if Sheridan himself had been in those camps, with his uncanny gift for discovering an enemy's purpose and movements, there would have been no surprise. But Sheridan was not there; he was in Winchester (not twenty, but fourteen miles back) holding a conference with some bigwigs from Washington. The first division of the VIII Corps, caught in their beds, was swept away, partly taken, partly driven in flight, all its guns captured, without firing a shot. What was left of the corps tried to form line on the XIX, but was taken simultaneously in front and from both flanks and likewise driven into rout with hardly any resistance. The XIX, taken in reverse by infantry, cannonaded in front by the captured guns of the VIII, lasted less than an hour before dissolving, all but part of one division, which fell in with the VI and some of the cavalry and made a stand on a hill overlooking the road, well back.

It was a hasty assemblage, ill-organized, only the cavalry thoroughly sound, which had camped so far from the foot as to be outside the circle of the rebel attack. Early might have swept it away, but his tired, hungry men could not be torn from the luxurious plunder of the Union camps. At nine in the morning, he got enough of them together to form line of battle and attack Wright, who retreated slowly, in pretty good order, swinging out Torbert on his left in a movement that held so much menace that Early gave up the notion of driving home for the time being.

At eleven the Confederate leader had his men in hand and could try again. He came on all along the line, orders had been given for the Union force, the small surviving Union force to fall back once more, when the discouraged and beaten soldiers heard, far in their rear, that unbelievable and intoxicating music—the cheers of Cedar Creek.

As they stared at each other in amazement the distant murmur swelled and swelled to a roar. In a few moments more men wearing the Maltese cross of the XIX Corps and the star of the VIII were joining them, not in order, but falling in under any standards or officers they could find. With them came Sheridan. He had mounted his horse at the shock of distant guns early in the morning, riding toward the sound until he met the first group of fugitives, whom he turned into a provost's guard by forming them across the road. "Turn around boys, we're going back," said he. The provost's guard grew to the strength of a company, a regiment, a division, a corps, shouting "Here's Phil Sheridan; we're going back!" and according to one witness, "throwing up their caps, leaping and dancing in wildest glee" as they hurried back to the battle.

"Where's the VI Corps?" asked Sheridan as he approached the front. There was nothing wrong with that formation; Wright had just stopped Early's last push, was all in line with Custer champing at the bit on one flank, asking every five minutes for permission to go, the other two cavalry divisions on his left along the road, and such guns as had been saved with them. Early, upset by this bold countenance on the part of an army that ought to be in flight, and still more upset by the presence of so much cavalry—his own was weak and had fought badly —was beginning to think of defense. He formed a new line, along walls and rail breastworks, carrying it out left and right to bring infantry opposite those menacing clouds of horse.

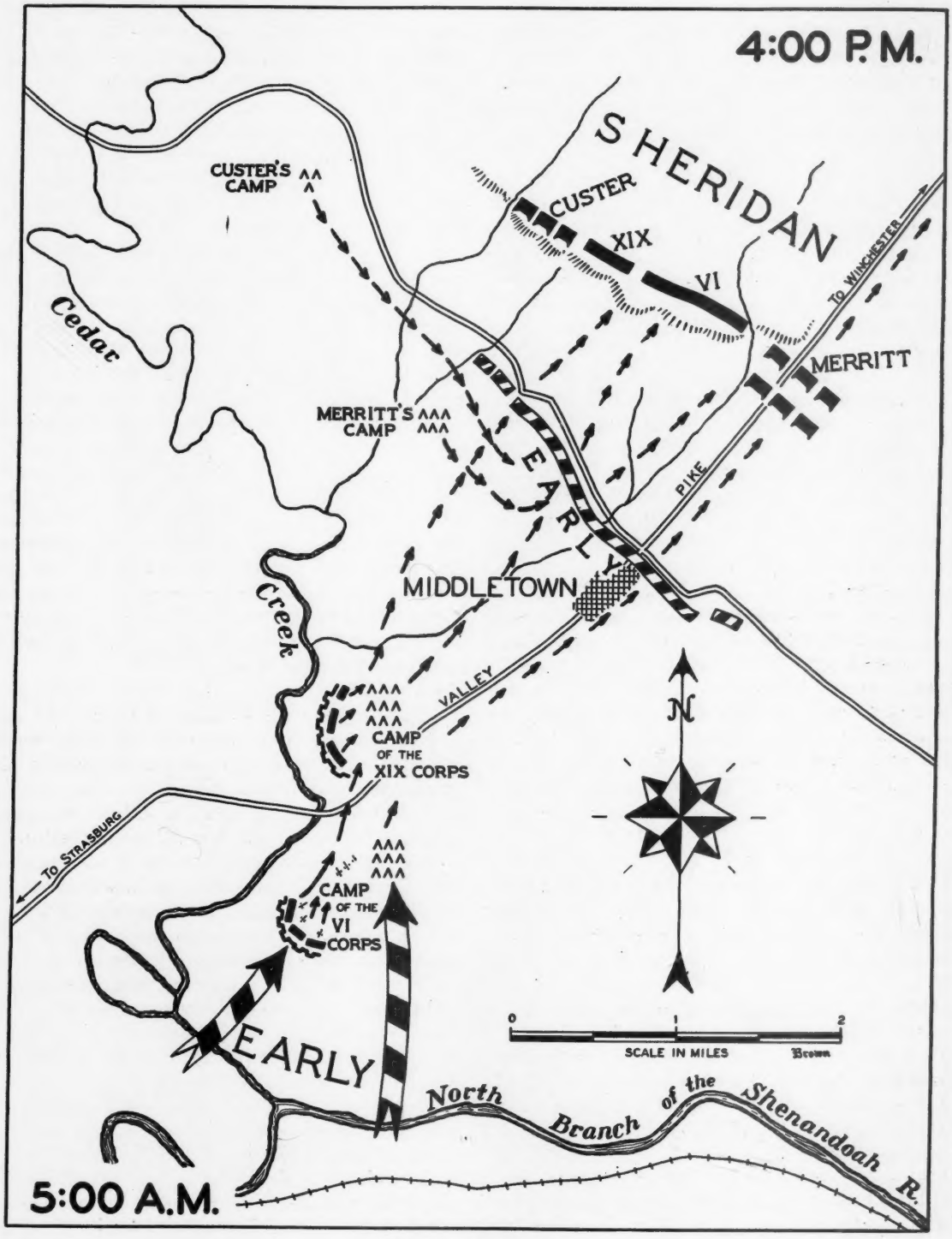
While he was doing it Sheridan rode the front of the Union formations from one flank to the other, swinging his old blue campaign cap and shouting, "We're all right. We'll whip them yet."

It would be near four o'clock when he reached the extreme right of the line and there noticed how thin the successive prolongations had made Early's line. There had been time now to get the returned fugitives into some semblance of organization; Sheridan swung them forward in a general attack. It is inaccurate to say that it broke through anywhere; the whole Confederate line rolled right away before that attack, with Sheridan everywhere, urging his men to, "Run! Go after them!"

"We can't run, we're all tuckered out," cried a private at him and drew the reply:

"If you can't run, then shoot and holler. We've got the goddamndest twist on them you ever saw."

They kept them going. The overpowering Union cavalry smothered Early's attempts to rally. They recaptured the Union guns that had been taken in the morning; they captured all Early's artillery; all his ambulances; his ammunition wagons, his transport of every kind, and 1,500 prisoners to balance the 1,400 they themselves had lost in the morning. Early went flying up the Valley in such shape that his corps had to be completely reorganized be-



Map 5: Cedar Creek.

fore it could take its place in Lee's lines, and the Shenandoah was out of the war.

The news arrived north with that of the capture of Atlanta. "Sheridan and Sherman have knocked the bottom out of the Copperheads," remarked Horace Greeley—correctly. For Democratic candidate McClellan was forced to repudiate his party's platform declaring the war a failure and the elections went Lincoln by so huge a majority as to constitute *carte blanche* to the President.

III

Latrine rumor had set the date of the opening of the 1865 campaign for March 29. The day broke cold, wet and cheerless over the Cavalry Corps, Army of the Potomac, which had done little but outpost duty since Sheridan left last fall. Gregg, whom the men adored, had resigned; Wilson had gone to the West; they did not know the new leaders—and it seemed that the war of siege and thickets in which they were now tangled would never end. But that morning a bugle blew sourly through the damp; they saw a guidon half lift and behind it there came riding down the line a skinny little man on a big black horse. Little Phil was back; the men cheered and passed the word that things would be humming now.

They were right. For days now Little Phil had been pacing the floor at headquarters conferences, replying to every argument with, "I tell you I'm ready now to strike out and smash them up. Let me go!" He had permission for that date. Before noon the whole corps, now 13,000 strong, was moving through the wet spring woods in the walking columns that meant a long pull with a hard fight at the end of it.

Nominally, it was to be a cavalry slash at Confederate communications—Sheridan's orders were effectively to break the two railroads that fed Lee—but actually the assignment was different, reflecting a subtle change in the status of both corps and commander. In the corps it was marked by the fact that only one of the three division leaders was now of the cavalry service—Custer, who had been brought up under Buford, and to the front under Sheridan himself. The others were led by a pair of infantrymen—Devin, Crook. And still more marked was the fact that now the whole corps was armed with repeating rifles and accompanied by that lavish equipment of artillery Sheridan had asked the year before—more artillery in proportion than the infantry itself had.

Obviously, this signified the triumph of Sheridan's theory of cavalry over Meade's. But this is not all. As a subordinate leader whose ideas had gained preference over those of his nominal chief, his position was somewhat anomalous. This anomaly was reflected both in his title, which was "Commander in Chief of the Army of the Shenandoah, serving with the Army of the Potomac," and his assignment in this opening campaign.

For the drive he headed was only nominally against the rebel railroads. As Grant instructed Sheridan before the move began, the true purpose was to make Lee come out of his trenches and fight. If, after Sheridan had reached the railroad lines, the Confederates threw against him more forces than he could handle, good—he could use his mobility to dodge them and either swing back to the main army, or turn south and hook up with Sherman, who was now thundering through the Carolinas. Meanwhile Grant would take Richmond; for the detachment of a force big enough to handle Sheridan would leave Lee's lines unable to resist assault. If Lee divined the presence of the cavalry corps and opposed it with strong forces before it reached the railroads, good again—Sheridan was to call to his aid whatever infantry corps he found nearest, assume command of it, and fight the big battle right there, under his own direction.

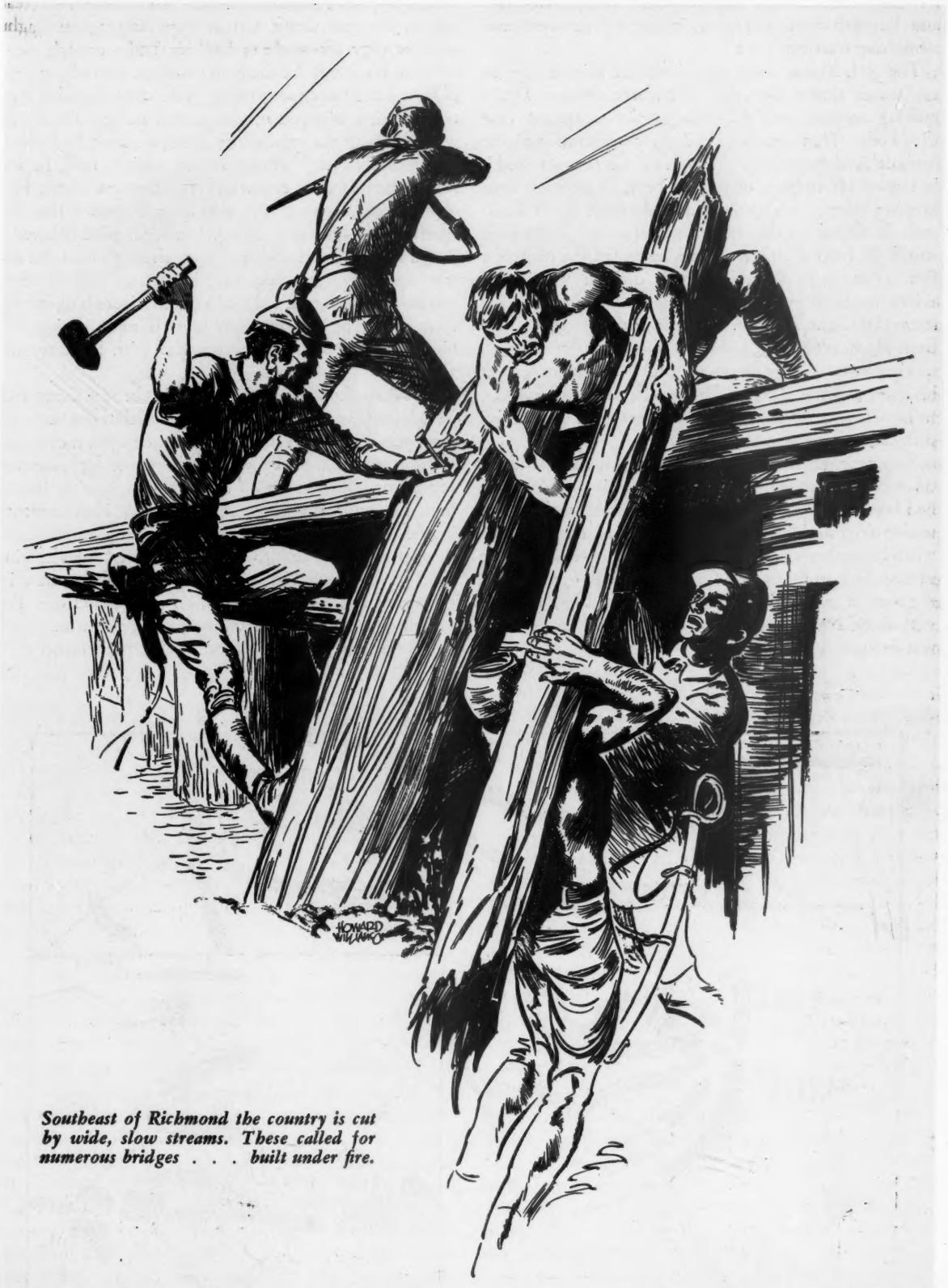
That there would always be one or more infantry corps near enough to help Sheridan was provided by the remainder of the army orders for the movement. Sheridan's corps was to cross the north-south Hatcher's Run, headed west, then swing north in a vast half-right wheel. Inside his movement, making the same wheel through a narrow circle, Warren's V Corps was to march; and inside Warren, through a circle still narrower, Humphreys with the II Corps.

In effect, then, Sheridan was given a semi-independent command as leader of a vanguard, with as many troops as he needed under his orders. In effect also, the last distinction between cavalry and infantry was abolished except during the period of the approach march. Sheridan's own corps was merely placed at the extreme wing of the turning movement because, of all the corps, it had the greatest strategic mobility, and of all the generals, he had the greatest skill at using speed.

On the afternoon of the 29th March it rained pitchforks and nigger babies, continuing through the night and the next day. The country southwest of Richmond is low-lying, densely wooded, quaggy, cut by wide, slow streams that give poor drainage. Under the pounding rains roads became impassable to wheels unless corduroyed, an important element in the military situation. It enabled the Confederates to gain utmost advantage from their South Side Railroad, running laterally behind the front of operations, and unaffected by the weather.

On the 27th, Lee had already learned of the cavalry concentration behind the extreme Union left, and realizing that it portended a raid around his army—though, it seems, he did not grasp the ultimate purpose of the movement—he planned to use his superiority in communications to drive a wedge between Sheridan and the main Federal army, smashing the former.

The night of the 29th therefore saw General Fitz Lee arrive at Five Forks with all the cavalry of the rebel army. Next morning he was joined there by Pickett, who was to have charge of the operation, and who had brought two infantry divisions with their guns down the railroad. At the same time the Confederate forces in the trenches executed a general slide rightward along their lines, setting free part of A. P. Hill's Corps and all of Anderson's for a surprise attack. This blow was to strike in on the extreme left flank of the Union infantry, where their



Southeast of Richmond the country is cut by wide, slow streams. These called for numerous bridges . . . built under fire.

trenches ended near the junction of the White Oak Road and Boydton road, rolling their line up eastward and away from Sheridan.

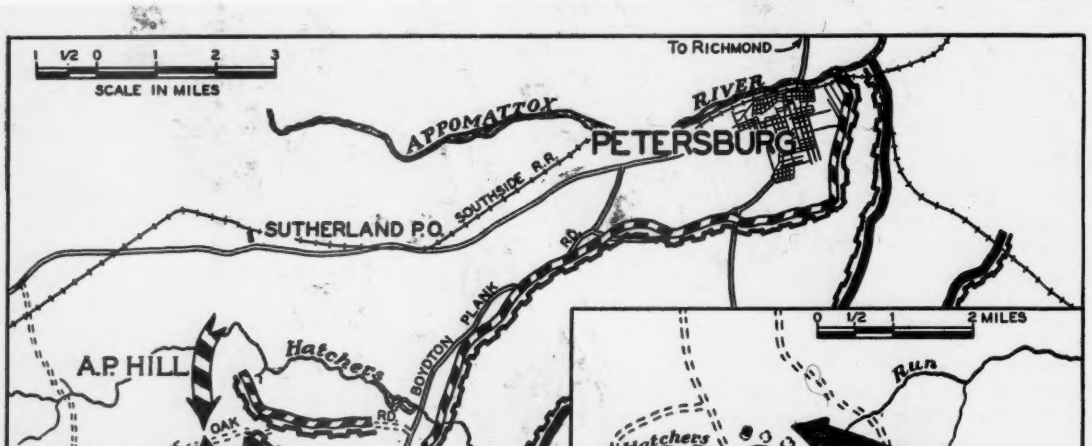
The 30th March was a day of obscure skirmishings in the woods under the rains, Sheridan's division Devin making contact with Pickett's cavalry vanguard near Five Forks. That same rain and the configuration of the roads delayed the march of Warren's V Corps and forced it in toward Humphreys of the II Corps, at the same time keeping Warren to a narrow front. When A. P. Hill's attack developed on the morning of the 31st it therefore struck the head of a deep column instead of the flank of a line. (Map 6.) Warren's leading division was indeed driven in, but the defense impacted along the line of a stream. At noon Hill was stopped; in the afternoon help from Humphreys joined Warren and he counterattacked so vigorously that by afternoon Hill had lost more than his gains and was clinging for dear life to his field works, so lamed as to be unable to take more than a defensive part thenceforth.

Southwest of this battle Pickett had caught Sheridan's columns coming along the several roads into which they had been forced by the rains. With artillery and concentration on his side (Sheridan's guns had been delayed when he pushed on with the horse), he drove the Union cavalry back to Dinwiddie Court House. But here, about the time Warren finished his job on A. P. Hill, Sheridan got all his men assembled in trenches and Pickett also was brought to a standstill.

At this point Sheridan's mission was already a success. Off to the east Grant was asking Wright and Parke whether they thought Lee had not taken enough men from his lines to make the final assault of Petersburg possible and they were answering "Yes." But Sheridan was not thinking in terms of the general success alone. He was filled with the spirit of the offensive, when he learned at five o'clock of Warren's success against Hill, he instantly perceived an opportunity to destroy Pickett. His own position, facing a little west of north, meant that the rebels facing him were nearly east-west, with Warren's Corps far in behind their left rear, already across the direct communications between Pickett and Hill. Warren had dealt Hill so rude a stroke as to eliminate him for the time being; he was therefore free. If now, during the night, he swooped on Pickett's rear with his three divisions—

Sheridan asked for the move. Far in the rear Grant and Meade, reports and maps in hand, discovered the same opportunity and sent Warren orders for the same move. But Warren, always a perfectionist, only replied by telegrams suggesting different routes of march, suggesting that a bridge be built, suggesting a dozen minor improvements in the plan, and while he wrote carefully worded dispatches the night passed. Pickett's scouts brought him word of the danger he was in. At daybreak he drew in his horns, and Sheridan was in no good mood over the missed opportunity as he followed up the retreat.

But now, on the morning of April 1, the weather con-



Map 6: Five Forks.

Half of Anderson's command was taken prisoner.

ditions that had fought for the Confederates shifted their allegiance. Pickett's men had come with trains and guns; even were these sacrificed they could hardly get away from Sheridan's lighter-moving cavalry along the foundered roads. Pickett had to stand for a fight. He chose a position at Five Forks, where some old trenches, hastily improved, gave him some chances. His front was a rough crescent covering the road junction, facing south and with the left flank covered by a switch. (Inset, Map 6.)

Sheridan, as usual in possession of complete, accurate information about the enemy, had been following close with his 13,000. His orders brought Warren on the scene from the right and at one o'clock the position solidified. Custer was facing the right flank of Pickett's trench-line, Devin was spread along its front. Both were dismounted, along the edge of woods, with instructions to offer constant threats of attack, with the exception of one brigade of Custer's command, which was kept in the saddle working westward, as though to attempt something against Picket's right wing, and thus attracting Fitz Lee's cavalry to the defense of that flank.

This left Pickett with only that reëntrant angle of trench to cover his left, and against this Sheridan designed to put in the whole of Warren's Corps, supported on its right by the independent cavalry division of Mackenzie, which Grant had speeded forward. The attack was to be an oblique with a tremendously reinforced right wing, to throw the Confederates away from their main army. Of Warren's three divisions, that of Ayres, the weakest, was deployed to come against the Five Forks

lines from the southwest, linking up with Devin on its left and engaging the attention of the rebels at the angle. Crawford, the heaviest of the three divisions, would dress on Ayres, slide past the end of the refused angle of trench and cut around to take the line in reverse. Griffin, with the third division, was to follow Crawford in column, lending intolerable weight to his push, Mackenzie ride beyond Crawford and cut the rebel retreat.

But Warren drew his sketch-map for the operation wrongly, placing the limit of Pickett's trench-line too far east. The consequence was that Crawford, with Griffin following, missed it entirely. Ayres, with whom Sheridan himself was riding, suddenly received an intense fire of musketry from his left, where his troops caught the blast from the angle.

Sheridan himself rode to the skirmish line, helping Ayres half-wheel the division leftward, bringing up the reserve brigade to prolong the line out to the right. His staff rode off to keep Crawford and Griffin going on the line they had already taken, striking far around behind across the direction of the rebel retreat. Little Phil labored like a demon, got everything into position, carried two regiments out until they lapped round Pickett's trench line, and then personally led a whirlwind charge, riding his big black horse with a guidon in his hand. Pickett's flank burst; Devin swung in as the attack reached his front and the Confederate line was rolled up. Griffin and part of Crawford arrived from the woods to destroy the last rally; Pickett lost 4,500 prisoners, all his guns, most of his trains, and Lees' striking force, the only one he had for offensive operations, was destroyed.

And where was Warren while this was going on? He had been near Sheridan when Ayres was struck by the first flanking fire. When that broke out he rode off into the forest to change the direction of divisions Crawford and Griffin, but in the tangle of woods missed them too, and did not again reach the front till it was all over but the pursuit. There was one thing Little Phil Sheridan could never forgive in any man—unwillingness to get to the scene of action. Now Warren had twice in two days been missing when he was most wanted. Sheridan peremptorily removed the hero of Little Round Top and gave his corps to Griffin.

IV

Now the lion of the South was wounded to death, no more men left for any offensive blow and along the Petersburg lines Wright and Parke attacking him. They won a lodgment, a trench, a whole line of trenches, they were in, during that twilight when Pickett's last stand before Sheridan so disastrously broke. Next morning Jefferson Davis was summoned from church to flight; another morning and Weitzel's men of the XXV Corps were marching into Richmond under smoky pillars of destruction.

The pursuit started that April 3, Sheridan leading, with the cavalry and V Corps under his orders, Meade following fast with the II and VI Corps, and Grant bringing up the rest of the army. Lee's assembly point was Amelia Court House. Both Grant and Sheridan guessed it would be near there. The moment the Petersburg lines were won Sheridan had been rushed forward to get across the Danville Railroad between Jetersville and Burke's Junction. He reached position on the 4th April, before Lee was fully assembled. That same night the V Corps was intrenched at Burke's Junction, (Map 7), and one of Crook's brigades lashed out along the line of the South Side railroad toward Farmville. It was this brigade that caught and burned Lee's headquarters train the next morning, where it had been sent on ahead of the flying army.

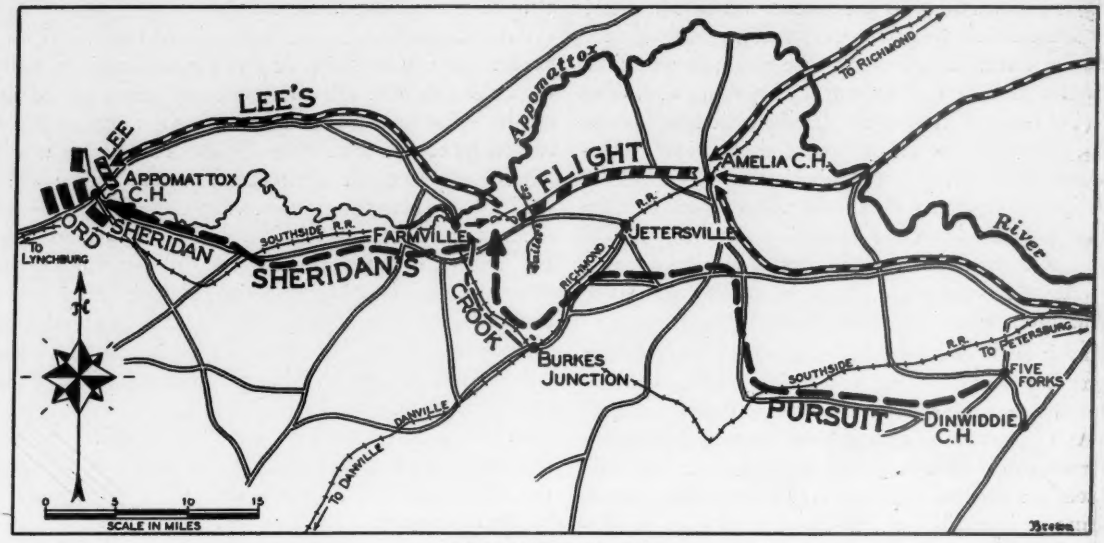
Meade did not arrive with the other two Union Corps till the 5th. Lee got his men fully in hand that day, and though the troops were dog-tired and starving, dared not stay with Sheridan's formidable force already seizing positions along the only line of retirement now left open. He marched by night, in several columns with the trains north of them, to their right—a change from his original plan, which had been to send the trains ahead, clearing the roads—a change forced by Sheridan.

In the morning Meade went toward Amelia Court House in attack formation and found Lee gone. But Humphreys of the II Corps caught the tail of one rebel column and his cannonading helped turn the whole army in the right direction. Besides, Sheridan, reaching far north on the extreme left wing of the Federal army, had already attained so great a distance that the Confederate columns had been unduly crowded toward their right, in on their own trains. This slowed them up badly. Crook's cavalry division was granted time to slip between two of the formations and attack trains so energetically that Anderson's Confederate Corps had to stop and form line of battle to drive Crook off, just west of Sailor's Creek.

This halt also stopped Ewell, who was behind Anderson on the roads; Wright's VI Corps caught up the latter and forced him to stand on the banks of Sailor's Creek. Meanwhile Sheridan brought the rest of his division up to help Crook hold Anderson's force. The latter was now in a line of hasty field works; Sheridan fronted it with all his corps but Crook, who was shifted round Anderson's front to close the only road of retreat. Ewell sent to Anderson, proposing they unite and drive this cavalry off, but before either general could do anything about it, Wright's artillery opened and at the same moment Crook led a dismounted charge onto Anderson's flank and rear.

Anderson was blown right away, with half his command taken prisoner, and the advance rushed on to surround Ewell, who surrendered with what was left of his corps before evening. The trains all went, too. But though Lee had lost nearly half the men he had on March 29, he had now gained a lead on the whole Union army with the rest.

However, there was still Sheridan; there was always Sheridan in this campaign, reaping the fruit he had planted at Yellow Tavern, when the Confederate cavalry service was struck down forever. As soon as the fighting round Sailor's Creek was over, he turned southwest, spend-



Map 7: Pursuit of Lee.

ing his mobility without stint to get round the Confederate column toward Lynchburg. Behind Sheridan the V Corps was moving west on the roads south of Appomattox River, and south of the V Corps, Ord with the XXV Corps, which had marched far and fast, taking no part in the move toward Amelia Court House.

On April 7, while Humphreys' II Corps was pecking at Lee's rear guard near Farmville and the Appomattox crossing, Sheridan was gaining, going right past Lee to the south. On April 8 in the morning he turned north to Appomattox Court House. There he caught Lee's trainloads of provisions, and the poor rebels went to hungry beds that night. Next morning Fitz Lee and Gordon were appointed to fray a passage through Sheridan. They tried; there were a few shots fired and some little movement but for once the greatest fighting leader of the Union did not fight. Sheridan's cavalry merely moved right and left like a parting curtain, and allowed the Confederates to see the solid lines of Ord, rank on rank.

"Then there is nothing left to do but go and see General Grant," said Lee.

V

After the war Grant, who had come to lean on Sheridan as his man of all work as he had leaned on Sherman in the west, remarked that Little Phil was the one man he could trust to lead an expedition without going off on a private war of his own. "I rank him with Napoleon, Frederick and the great commanders of history."

At the time there seems to have been general agreement, but since then Sheridan's fame has been somewhat obscured by that of Sherman and of Grant himself. Partly, this is no doubt due to what may be called the atmosphere of modern military thinking. The method of Grant and Sherman, strategic attack combined with caution in the tactical field, is apparently more in accord with modern conditions of war than Sheridan's free offensive.

Sectional feeling also plays an appreciable if minor part in the relative decline of Sheridan's renown. In New England, where the best and most numerous studies of the Civil War have been written during the last generation, Sheridan has always been seven kinds of a scoundrel for removing the chivalrous Warren in the very hour of victory. Grant's own reason for his appreciation of Sheridan furnishes another partial clue—Little Phil did not go off on private wars. To anyone reading the orders he received with a record of subsequent events, his contribution is apt to appear purely executive. His full influence does not appear till one examines the part he played in having the orders written as well as the documents themselves.

Yet in the long run, it is Sheridan's very success that has deprived him of more complete appreciation. The eye of the beholder becomes irresistibly fixed on the spectacle of the mad scramble up Missionary Ridge, the ride from Winchester and the rally at Cedar Creek, the little man jumping his horse over the barricade at Five Forks. It makes him look like a leader of happy improvisations, of whom it could be said as of Logan, "Everything he did on the spur of the moment and in the heat of battle was sure to be right; everything he did on mature reflection was wrong."

This would not be too heavy an accusation, even if it were true. No nation and no army were ever in more need of such moral stimulus as brilliant improvisation can supply than the United States and its forces in the summer of 1864. No man was better fitted to supply that stimulus than Sheridan, who showed a gift of arousing enthusiasms paralleled in American history only by Jacob Brown.

But the accusation is not true. We should not let the

fact that none of Sheridan's great battles were fought out exactly as planned blind us to the other fact that he could plan a battle as well as fight one. Something nearly always happens to disturb battle plans—the obstinate refusal of the enemy to behave as expected, if nothing else. The rare thing about Sheridan, the quality that lifts him to several thousand feet altitude over the ordinary commander, was the ability to recognize in the midst of action that a change of plan was necessary. At Winchester, he planned to break down one flank; it became impossible, but he instantly and successfully broke down the opposite wing. At Five Forks the failure of his original plan only led him into another, far better.

It is this quality of flexibility of mind, of being able to do anything and everything, that makes Sheridan difficult to classify or even to appraise. He had no military specialty, like Thomas' counterattacks, or Stonewall Jackson's flank sweeps or Sherman's clutch-and-circle. He did whatever the occasion required. At Perryville he counterattacked; he intrenched at Halltown, cautiously; at Missionary Ridge he was bold to the point of recklessness; worked a surprise attack at Boonville; ordered two gigantic flank sweeps at Fisher's Hill and a frontal assault at Winchester. The limits of his talent were never reached. Perhaps there were none.

Grant apparently thought so, and if his testimony be thought biased by association, one need only turn to the archives of the French Empire. There is a report there from Marshal MacMahon, a not-unqualified judge, dating from 1866, when Sheridan went to the Texas border with an army corps to help the French make up their minds to clear out of Mexico. "It might be worth making a fight" says this report in substance, "if Grant were their commander. But not against this man."

This is not the kind of opinion one expresses with regard to a mere improviser, and the more one studies Sheridan's career, the clearer it becomes that behind his improvisation there was steady, careful planning, based on intimate knowledge both of the enemy and geographical conditions. It is not the type of planning that aims to eliminate chance, but to leave sufficient reserves of force to overcome chance.

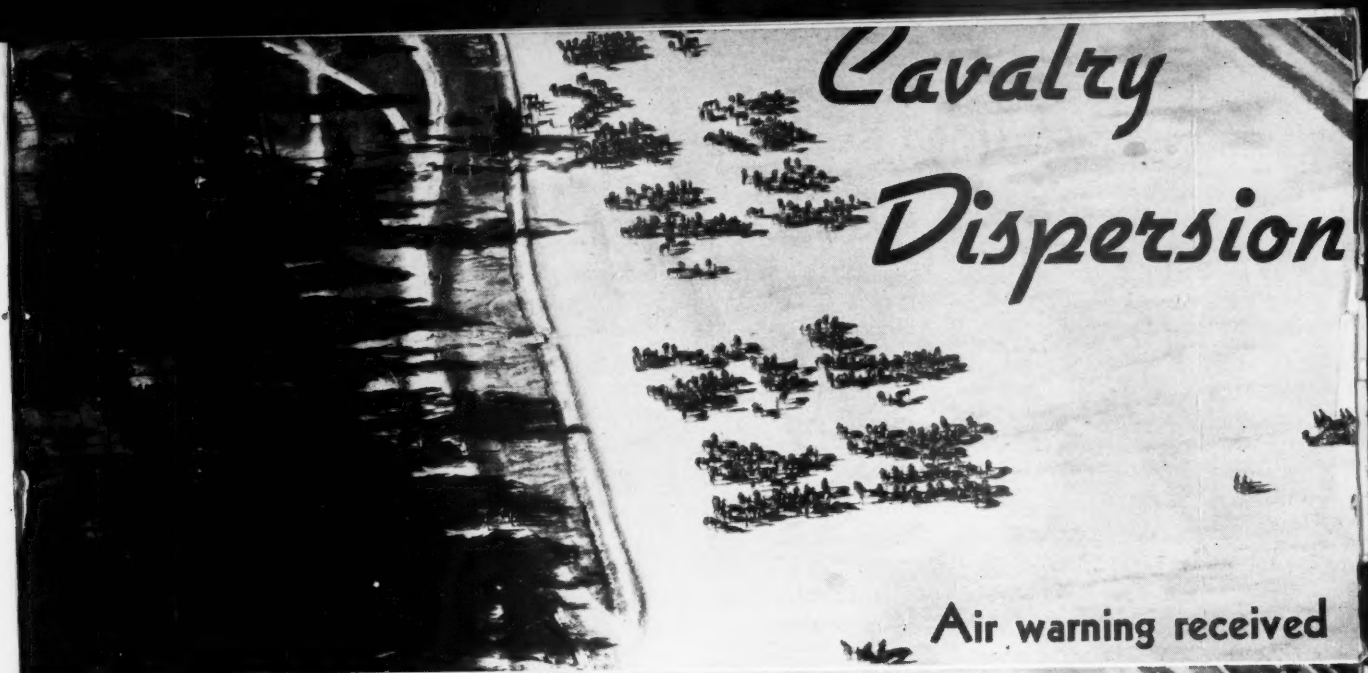
Even Cedar Creek, the least planned of Sheridan's battles, the one in which he was planned against, corresponds to this rule. His camping arrangement placed the cavalry so far from the infantry during the night that the two camps could not be comprehended in the same attack. That cavalry formed the reserve in a sense, when he began the battle again in the afternoon. It won the fight, though the infantry did the physical work, handled the contacts. For it was the threat of the cavalry that prolonged and thinned Early's lines in preparation for the infantry action, as the threat of cavalry paralyzed Pickett in preparation for infantry attack at Five Forks, as the threat of cavalry halted Anderson and Ewell in preparation for infantry attack at Sailor's Creek.

In fact, it is this constant use of the mobile force as a threat that more than anything else characterizes Sheridan's technique and perhaps holds the key to the recovery of the lost offensive by armies of the future. Sheridan's cavalry as cavalry, mounted, charged into the thick of a fight just three times — at Boonville and Winchester (Torbert's), where the charges came altogether as surprises, and at Yellow Tavern, where the horsemen were operating against an enemy also in the saddle, who had lost momentum. In the rest of Sheridan's campaigns cavalry merely threatened to charge, and by this threat dislocated the enemy mentally and physically, induced him to alter his dispositions and prepared the way for the decisive advance of the infantry. This happened at Cedar Creek, Winchester, Five Forks, even in a sense at Fisher's Hill, where Early kept watching Averell. At Sailor's Creek alone was the threat made good—but then by cavalry metamorphosed into foot.

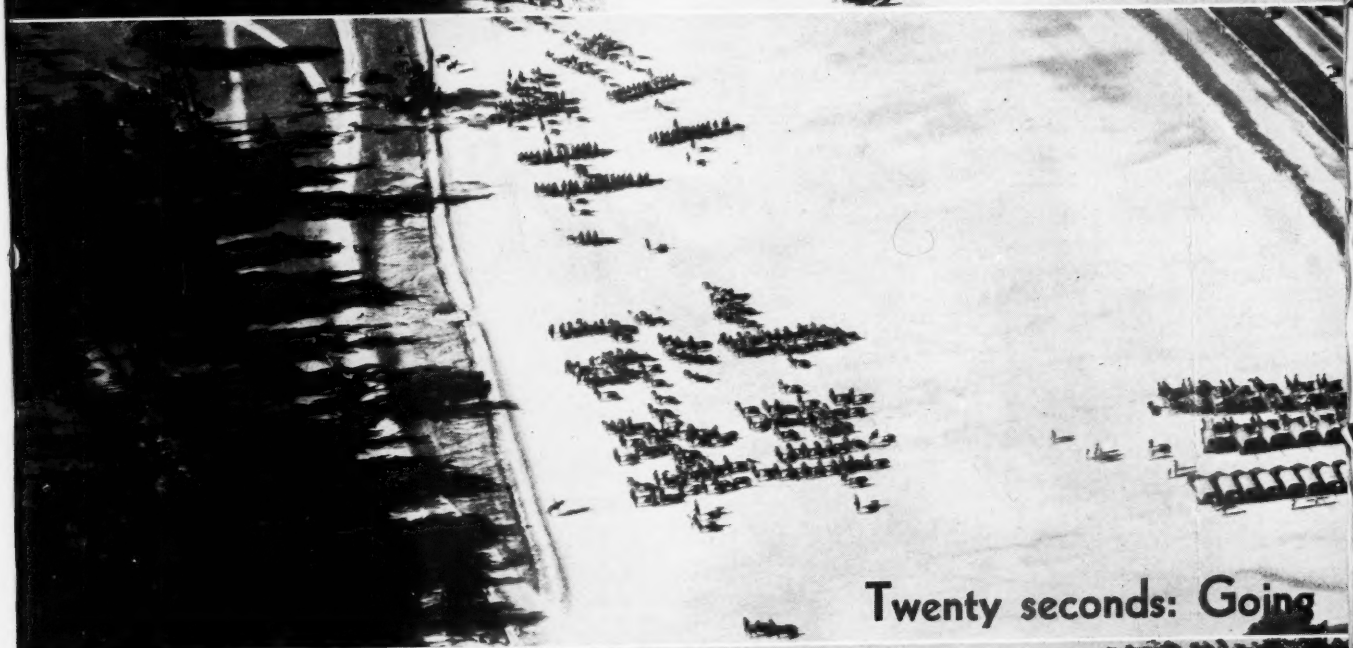
Yet when all is said and done these are details of something that one is not permitted to examine in detail. There are no details of Sheridan's career. It is one, and that one inimitable, from the day when he tried to spit a cadet sergeant on a bayonet to the day when he ramped victoriously across the fields of Appomattox. Between the two he had won the greatest moral victories of the Civil War.

Note: Photos on opposite page cover operations of 11th Cavalry, Presidio of Monterey.

Cavalry Dispersion



Air warning received



Twenty seconds: Going

Forty-five seconds: Gone

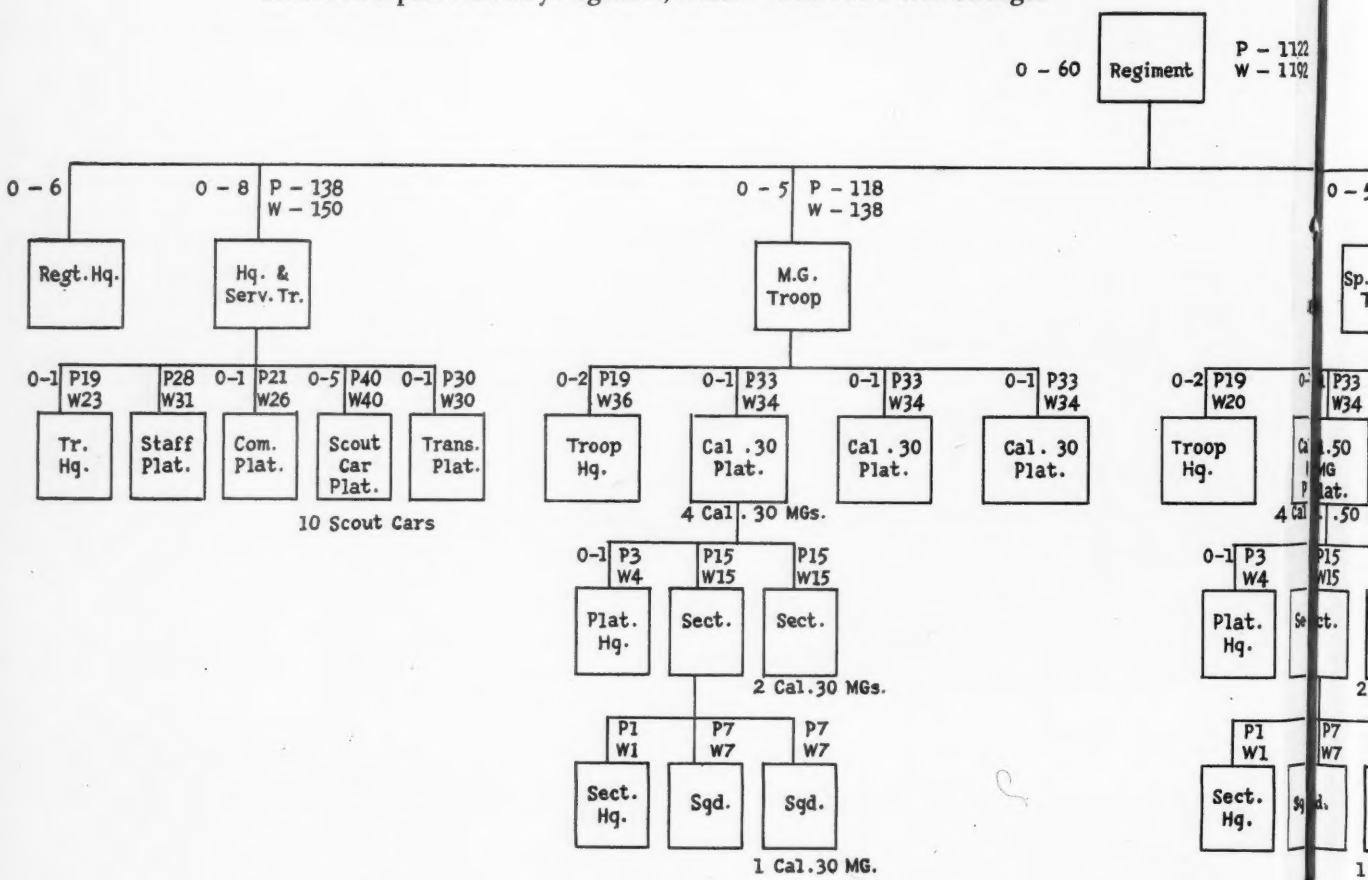
The Nine Troop Regiment

In its determination to maintain the Cavalry at a high state of efficiency and readiness for immediate employment on M-Day, the War Department has announced approval of a change in the peace strength organization of horse cavalry regiments from six troops to nine troops. Actual expansion of the regiments will take place only when the necessary personnel becomes available. The change involves an increase in the existing peacetime strength of 744 enlisted men to 1,122 in the new regiment. By virtue of its rôle, which requires it to play an important part in the early days of any war, Cavalry of necessity must be an M-Day organization. It is to make it an M-Day organization primarily that the Chief of Cavalry, Major General J. K. Herr, has recommended this change.

The existing peacetime cavalry regiment of 744 enlisted provides a Headquarters and Service Troop, a Machine Gun Troop, and two Rifle Squadrons, each of two Rifle Troops. For war service, this regiment would have to be expanded to an enlisted strength of 1,608. It is thought that any plan which contemplates such a complete wartime transition as this expansion of personnel of more than 100% is objectionable. It is to obviate such a wholesale expansion from peace to war that the new organization has been approved. The new organization sets up a peacetime regiment of nine troops as follows:

Headquarters and Service Troop

Chart of Proposed Cavalry Regiment, Horse — Peace and War Strength



Machine Gun Troop
Special Weapons Troop
2 Squadrons each of 3 Rifle Troops.

The peacetime strength of the new regiment is to be 1,122 enlisted and the wartime strength 1,192 enlisted.

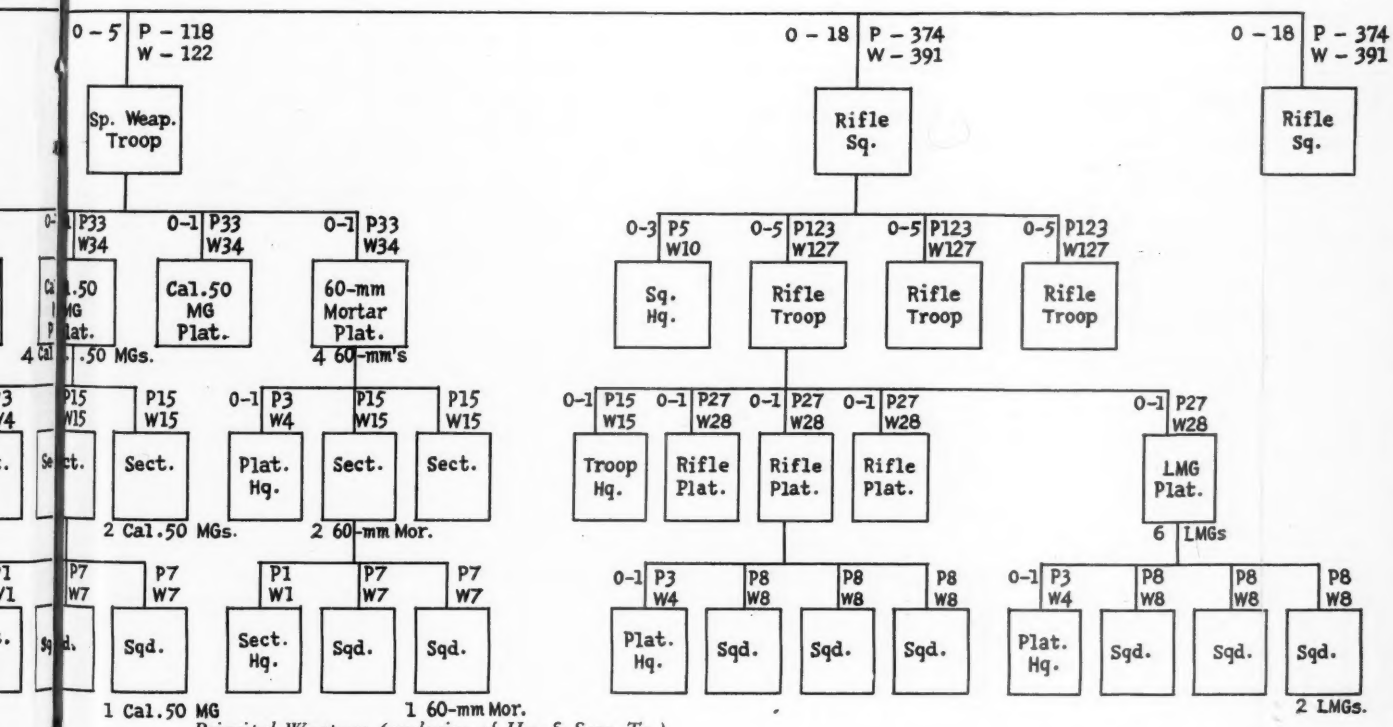
The inclusion of two additional Rifle Troops in the peace-time regiment, one in each of the two Rifle Squadrons, results in a three-troop squadron which has many advantages over the existing two-troop squadron, among which are increased combat power, flexibility of employment, and other well-known military advantages of the triangular formation.

The injection of the Special Weapons Troop, which is a distinctly new idea in cavalry, greatly increases the supporting fire power available in the peacetime regiment. This Special Weapons Troop will be equipped with (8) eight .50 caliber machine guns and (4) four of the new 60 mm. mortars.

The Machine Gun Troop will add (12) twelve .30 caliber water-cooled machine guns to this regimental fire support. In addition, there will also be 36 light machine guns, caliber .30, six in each of the six Rifle Troops.

For mechanized reconnaissance (10) ten scout cars are provided regimental headquarters. This is an increase of four over the present number. Supply of the regiment will continue to be entirely motorized.

This modification of the horse cavalry regiment will provide the United States Army with a modern, highly mobile, hard-hitting horse cavalry regiment, equipped and organized to accomplish the normal cavalry missions in any war of movement. It is considered a great improvement over the present small six-troop peacetime regiment.



Principal Weapons (exclusive of Hq. & Serv. Tr.)

	P & W
Light machine-gun	36
Cal. .30 (heavy machine-gun)	12
Cal. .50 machine-gun	8
60-mm. Mortar	4

Corps Reconnaissance Regiment

The War Department has announced that, effective December 1, 1939, the 6th Cavalry, Fort Oglethorpe, Georgia, will be organized into a corps reconnaissance regiment at that station.

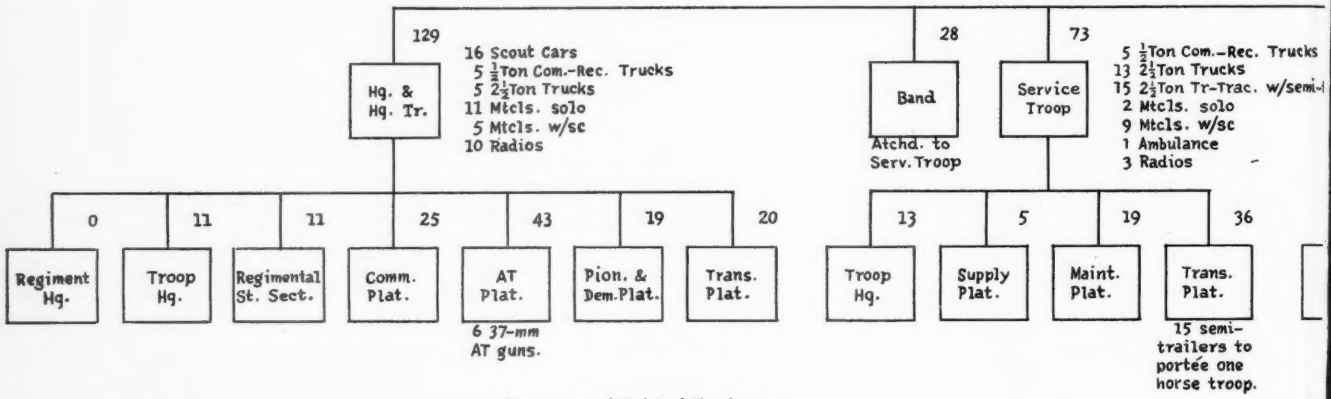
The purpose of this change is to provide the normal Corps with a mobile regiment, equipped, organized, and trained primarily to provide ground reconnaissance and security for the Corps.

Initially, this regiment is to be experimental. It is planned to test it when the IVth Corps is assembled at Fort Benning, Georgia, in the spring of 1940.

As a result of the new organization, the 6th Cavalry which is now a horse cavalry regiment, will be part horse and part mechanized. Provision is to be made for one horse squadron (portee) of three rifle troops with the necessary motor transportation initially to transport bodily one of these troops—men, animals, and equipment. When the combat elements of the corps are about to contact large enemy forces within a few days' march the horse cavalry squadron will be given a mission of providing the close-in and detailed reconnaissance chiefly off the roads.

In addition to the horse squadron (portee) there is to be a mechanized squadron consisting of two reconnais-

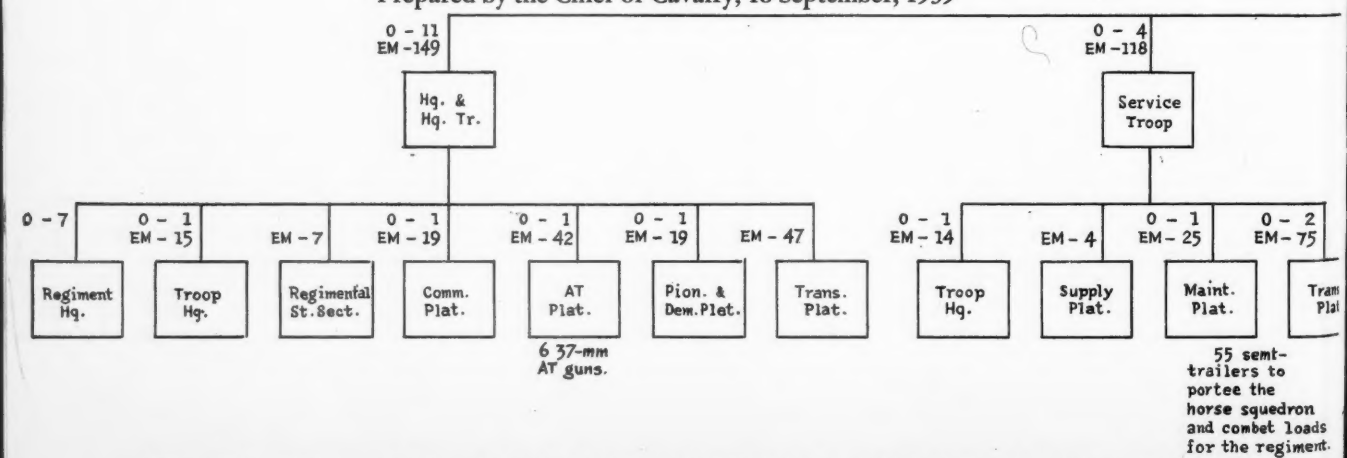
Proposed Corps Reconnaissance Regiment, Horse and Mechanized, Tentative Present Authorized Strength of 659
Prepared by the Chief of Cavalry, 4 November, 1939



Summary of Critical Equipment

40 Scout Cars
10 ½-Ton Command — Reconnaissance Trucks
24 2½-Ton Trucks
15 2-½-Ton Truck-Tractors, with semi-trailer
73 Motorcycles, solo
23 Motorcycles, with sidecar
1 Ambulance
38 Radios
230 Horses

Proposed Corps Reconnaissance Regiment, Horse and Mechanized
Peace Strength
Prepared by the Chief of Cavalry, 18 September, 1939


0 - 11 EM - 149
Hq. & Hq. Tr.
0 - 4 EM - 118
Service Troop
0 - 7 Regiment Hq.
0 - 1 EM - 15 Troop Hq.
EM - 7 Regimental St. Sect.
0 - 1 EM - 19 Comm. Plat.
0 - 1 EM - 42 AT Plat.
6 37-mm AT guns.
0 - 1 EM - 19 Pion. & Dem. Plat.
EM - 47 Trans. Plat.
0 - 1 EM - 14 Troop Hq.
EM - 4 Supply Plat.
0 - 1 EM - 25 Maint. Plat.
0 - 2 EM - 75
55 semi-trailers to portee the horse squedron and combat loads for the regiment.

NOTE: This organization is still under study and has not been tested in the field. Initially, it should be tentative.

sance troops and one motorcycle troop. This mechanized squadron will be of value in furnishing rapid and distant reconnaissance, particularly on the roads, also to furnish reconnaissance for any large motor groups detached on special missions.

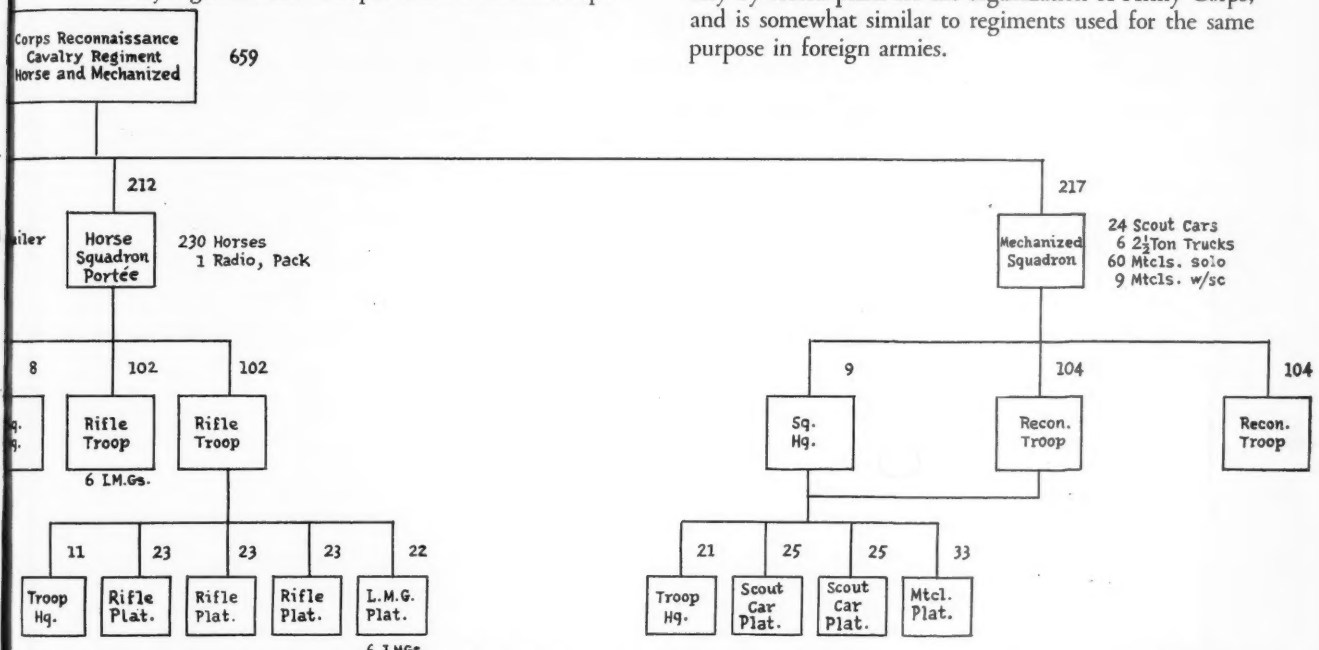
This flexible combination of horse and motor, the former porteed when so needed, enables the Corps Commander to provide reconnaissance and security for his corps in any situation which may confront him.

A pioneer and demolition platoon is also to be included in the headquarters troops to increase the mobility of the cavalry regiment and to impede that of hostile troops.

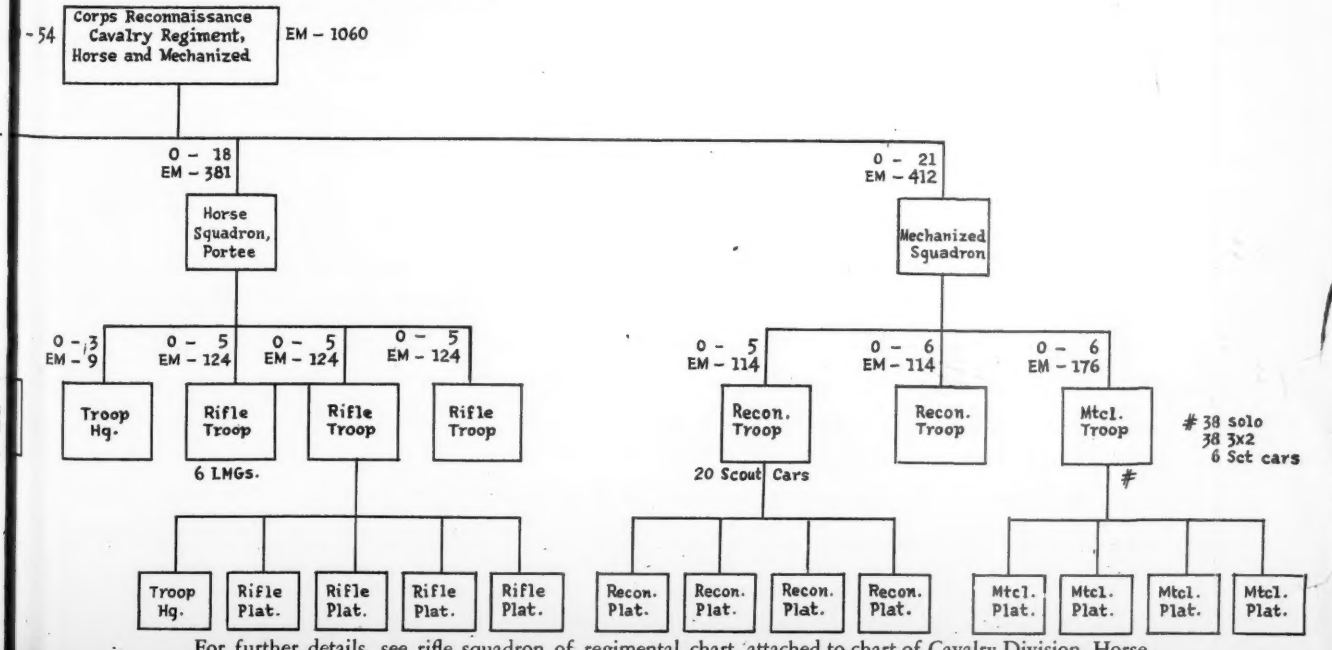
Included in the equipment of this new type regiment are 230 horses, 40 scout cars, 10 reconnaissance trucks, 96 motorcycles, 38 radios, 24 trucks and 15 truck-tractors with semi-trailers.

The organization of the Corps Reconnaissance Regiment (Cavalry) will not involve any change in the present allotted strength of the 6th Cavalry, which is 659 enlisted men. It is contemplated to bring this regiment to a full authorized peace strength of 1,088 enlisted men, provided increases in the Army make this action possible.

The organization of this regiment has been made necessary by recent plans for the organization of Army Corps, and is somewhat similar to regiments used for the same purpose in foreign armies.



NOTE: This chart is based on present authorized enlisted strength (659) of the 6th Cavalry, a horse regiment. Peace and war strength tables of organization for this regiment at expanded strength of 1,088 (P) in the 280,000-man army will be submitted after field tests. Items of critical equipment should be supplied as soon as practicable. This chart should be accepted as approval for this equipment. Conversion of this regiment from a horse unit will involve no change in number of troop units nor in grades and ratings. Present Machine Gun Troop will become the Service Troop.



For further details, see rifle squadron of regimental chart attached to chart of Cavalry Division, Horse.

An Editorial

Although these comments are presented under editorial form, in no way may they be considered as reflecting official views or opinions. Rather, they are the consensus of accumulated ideas and speculative reflections from varied sources.

Cavalry, regardless of its modern composition and organization, continues in its accepted relationship to the great coordinated combat team. In the proper balance of that team the cavalry role is as important today as it has been so proved down the course of military time. To sustain that balance in the combat team there must be available, organically, a component able and prepared to fulfill the tasks that demand a highly mobile ground element. Information, ground security, a tool for exploitation, a weapon of opportunity, a mobile reserve of great tactical mobility—all fall within the purview of those tasks. Current conditions in no wise have reduced the importance of these duties. The team member, fitted for the assignment of those duties, is cavalry, irrespective of its makeup or composition.

The assured accomplishment of these tasks envisages the power and capabilities of a combat arm. *Cavalry, properly organized and employed, is preeminently a combat arm.* Its appropriate employment is to be found in masses. Read the Russian thought on the utilization of cavalry to be found in the preceding pages to ascertain their doctrine on this arm. Any departure from this conception always has led to futililty. Witness the initial three years of the Civil War; the lost opportunities in the early days of 1914.

Other nations, for the fulfillment of the foregoing role, have created in recent years units identified under the term, "Light Mobile Forces." National policies and conditions peculiarly their own have accounted for the creation of these elements. Regardless of terminology, their purpose is the performance of cavalry roles.

Our cavalry affairs, likewise, must be predicated upon national policy and conditions peculiar to this country. In conforming to the situation which confronts us, we must consider foremost those factors which presage the need of highly mobile forces in our national defense. Consideration of these national factors accounts for the organization and composition of our mobile elements. It is believed they are sound.

Certainly, it will be agreed that our policy of national defense is founded under the priority of defending the continental United States and our posses-

sions, the continent of North America, and lastly, the Western Hemisphere. Each category involves vast extents of territory of varied terrain and climate. Each, likewise, comprises such expanse as to incorporate, undoubtedly, more than one theater of operation. The availability of ten million horses, together with ample forage supply, is a factor peculiarly American, as is also an industrial organization without comparison among other nations. These and a score of other factors have all influenced our current and accepted doctrine.

From the point of view of national policy it must be agreed that the organization of our cavalry has followed properly the distinct line of comformity. Our cavalry policy is clear and distinct. We possess one organized cavalry division. A second cavalry division should be completed and organized as such without further delay. *The creation of a cavalry corps in being is a vital necessity if we are to have the type of highly mobile force capable of performing its proper role under all conditions of weather and terrain.* We maintain also two regiments soon to be organized to fulfill the mission of corps reconnaissance. The two remaining horse regiments are available either as additional reconnaissance regiments or for use as a separate brigade, available to G.H.Q. or as army cavalry.

We have created a mechanized cavalry brigade and are now prepared to expand it into a more powerful and self contained division. This unit has benefitted by participation in frequent combined exercises which has molded it into a tactical unity now capable of assuming its allotted missions. It is believed that all realize and visualize its potential powers and usefulness. The next step involves the consolidation of this unit as a part of our first cavalry corps.

Four National Guard Divisions, now organized or in the process of organization, constitute a basis for rapid expansion of cavalry forces during the early days of campaign. In addition to these divisions there are three remaining National Guard cavalry regiments available for employment as corps reconnaissance regiments or as a separate brigade.

As with the great combat team, there must also be within the makeup of the subordinate arms, a regard for and a sense of balance. To this objective the Chief of Cavalry pays the closest heed. It is his responsibility that we have available to us under the various conditions which may face the army the type and organization of cavalry best fitted to accomplish effectively any assigned missions. The office of the Chief of Cavalry is alert and attentive to these future needs. There is no question involved as to any particular type organization under existing facilities. As conditions change and new factors arise it can be assured that the organization best fitted to meet them will be adopted. So soon as our army organization expands and each of the four armies becomes a tactical entity, measures will be taken to foster the creation of a mechanized cavalry division for each. At the same time it must be assured that there will be maintained a strength in horse cavalry essential to our national requirements and which is economically practicable by virtue of our available resources.

In considering the active execution of missions by highly mobile forces much care should be given to the question of antitank defense. Should not well balanced cavalry include also the necessary elements for this purpose? Accordingly, as a part of our cavalry organization, would it not be wise to provide antitank elements under corps and divisional control so organized and equipped as to constitute the most mobile element to be found on the battlefield? With excessive mobility these units would be able to intercept the threat of mechanized elements under all conditions and through ground fire be capable of exerting a considerably more effective fire than is possible through the mobile fire of vehicular mounts. Many assert that the best antitank defense is the presence of mechanized elements capable of neutralizing hostile mechanization. This method, however, is the expensive one. It would appear wasteful to commit a very expensive vehicle to this task when the same result might be accomplished through the fire of a moderately priced gun. In the event of a break-through by highly modernized army it will be the light, highly mobile forces which may be depended upon to neutralize any great advance.

There is a tendency by many to compare the organization and equipment of our army with those maintained by foreign armies. The factors of geography, national policy, industrial capabilities, agricultural productivity, all enter the picture and are too divergent to provide a conclusive basis for comparison. Potential theaters of operations, existing road nets, the potentiality of neighbors, and a score of other factors enter into the doctrine and policy which govern these questions. By the very diversity of prospective employment it is evidently unsound to compare by strength the various elements of the combat team maintained by us in proportion to these features maintained by other powers. Unless we propose to arm on a vast scale, we cannot anticipate the creation of certain type elements in any proportion to that which is now maintained by others.

Also, there is a tendency by many to approach the question of national defense from the point of view of perfection. We cannot support and maintain any arm in the manner in which its advocates may feel that it deserves. There must be constantly a regard for compromise in the gradual balance which is built up and that elastic balance kept throughout our progress. It is admitted that other countries have succeeded in creating national forces which present a formidable picture in their perfection of organization and equipment. That picture we cannot hope to approach, nor is there any need by us so to do. It has been estimated that in the creation of the modern army of Germany a total of approximately 36 billion dollars has been required. No, our demands manifestly are more modest, and our existing facilities must be relative thereto. There is need of a mutual understanding of the requirements of all rather than a preference for any single element. With that understanding and a sympathetic regard for compromise, there is little reason why eventually we shall not possess the armed force which our responsible agencies consider adequate and in the proper balance.

Training "Over Their Heads"

By CAPTAIN SAUL S. DORFMAN, *Cavalry Reserve*

The inadequacies of both active and inactive duty training for reserve officers must be overcome by the inauguration of training methods which will accomplish the greatest good for the greatest number. The necessity for a system of training that will develop initiative in officers of troop grade is indeed vital, for the battle plan, once drawn, depends for success upon the troop officers, rather than the general. Initiative is not developed by wishful thinking or by loose methods of instruction.

Most of the group schools which the writer has attended over a period of fifteen years, have demonstrated tractical principles by use of map problems involving the employment of regiments, brigades and divisions. These units are too large to set up in the mind of the average troop officer a routine thinking process that will enable him to function in grade, and have a definitely clear understanding of the details involved in the employment and disposition of units the size of a platoon, troop, or squadron. After all, in the event of an emergency, these are the units the great majority of reserve officers will command, not regiments and brigades. Troop officers are repeatedly heard to say that they feel a real need to be taught to function in grade, and in inability to intelligently comprehend or visualize the large scale operations generally set up in the school map problems.

Opportunity for practical leadership training is rare and generally non-existent for the great majority of reserve officers.

Since it is apparent that the reserve officer can secure his training and experience in leadership, only by work in group schools and by pursuing the extension courses of his arm, why not then afford a course of instruction which will accomplish that end by the use of methods that are visual, simple, and within the mental range of a limited military knowledge. Maps of large scale (12″ = 1 mile), contoured, and showing sufficient detail to permit the student to study and analyze the advantages and disadvantages of terrain should be used. Units not to exceed a reinforced squadron should be employed. The large detailed map and the small unit involved can and should produce a highly beneficial result. The lack of confusion in the mind of the student when he need only visualize a reinforced squadron should aid him materially in developing his tactical slant, whereas the use of regiments and brigades confuses the amateur tactician, because his limited military imagination cannot readily encompass units of such size.

It is therefore suggested that the Cavalry School prepare a uniform group school training program consisting of a series of command post exercises, using not to exceed a reinforced squadron on each side. Available large scale maps of the Fort Riley reservation should be adequate. Conduct of the problems on limited terrain possesses the advantage of reducing time and space factors to minutes, thus tending to develop the student's facility to make a hasty estimate of the situation and arrive at a decision rapidly.

Officers engaged in the solution of these exercises should function in grade, and possibly the next higher grade, but never higher. Time limits for solutions should be short for several reasons. The student must be taught to act with dispatch, not to vacillate, and also, the entire exercise should be concluded in from 2 to 2½ hours. A simple method of control can be devised to preclude the action getting out of hand, and so that the solution will be followed. Although most problems are capable of more than one solution, the school solution should be followed, otherwise too much time is lost in argument. In the ultimate analysis all map problems teach and demonstrate tactical or logistic principles, or both, and so long as the principle is adequately demonstrated, why fight the school solution.

Before going further, it is apparent that the method here proposed can only be employed in group schools having attendance sufficient to officer the units used in the exercise.

Control by the unit instructor acting as chief umpire, with surplus captains and field officers acting as assistant umpires will provide an excellent form of training for those officers not commanding units in the exercise. It is confidently hoped that with a little practice, the students will, under the mental stimulus of the presence of their brother officers, develop a capacity for decision. The student must be required to state his actions and orders in the presence of the entire class. He should use the map constantly, designate routes of approach in the conduct of his unit from place to place, state the formations employed and the security measures adopted. Study of terrain should be stressed, and oral analyses required.

Each exercise should be divided into several phases, be-

ginning with the assignment of a mission to the squadron commander and the issuance of his first order respecting the accomplishment of that mission. In this connection the squadron commander should state the mission in the presence of his assembled officers; make an oral estimate of the situation; a decision; then issue fragmentary oral orders to his troop commanders and commanders of attached units. Each lower unit commander repeats the same procedure, until platoon leaders have issued orders to their respective squad leaders, the map *must* be used to show the action and development of the force.

The first phase could be a march in the presence of the enemy, to include patrols and instructions to patrol leaders; the second phase could be the development of contacts with enemy patrols, while marching on or to a given objective; the third phase might cover development prior to action, approach march formations, security measures, liaison; and finally, the occupation of a defensive position, a meeting engagement and pursuit, or a withdrawal. Special attention must be given to problems of supply, maintenance of liaison with adjacent units, and communication to the rear. These are but elementary suggestions and are susceptible of countless variation. In all problems, however, there must be ample, adequate demonstrations of tactical principles, the use of cover and concealment for men and animals, proper use of automatic weapons, proper measures for reconnaissance and security.

The inactive duty training year covers from 30 to 32 weeks, or 15 to 16 biweekly group school conferences. A series of exercises, as herein suggested, supplemented by extension course study in those subjects prescribed, will do more to help the citizen officer attain a good, working knowledge of the military art, than the haphazard group school methods now generally employed.

In short, the troop officer must learn his immediate job.

A Foxhunter Views the Olympic Try-Out

By AN ELDERLY FOXHUNTER*

Fort Riley, Kansas, is an army post on the rolling prairie at exactly the geographical center of the United States, with some five thousand men and two thousand horses, and some twenty-eight thousand acres of land. An old frontier post, it is now highly modernized. The ridge that looks down on it, known as Rim Rock, is cut with canyons and makes a most varied and interesting country to ride or hunt over.

Fort Riley is all horse. Here come the remounts, unbroken and unsung. One noted great improvement in both size and quality and breeding. Each year there seems to be an improvement in these remounts. It was the consensus of opinion at the school that this year's issue was the best that had yet been received, and it was also the consensus of opinion that the best of this year's issue came from Front Royal. The outstanding thing about the school is the enthusiasm of both its instructors and students, and in many cases that I saw, the remounts. Everyone rides or is trying to ride—men, women and children. They know horses and horsemen.

This is the setting that we found on our arrival at Fort Riley on the 29th of September, the opening day of the Olympic Trials. The purpose of these trials was to pick the team of officers and horses that would represent the United States at the Olympics in 1940. To one who had had a taste of cavalry life and training in the border service, and had at rare intervals since been in touch with the Army at Fort Bliss or Fort Meyer, or in various horse shows and in polo, it was hard to believe how far and how fast our mounted services have come in both horses and horsemanship. The try-outs fulfilled in every way the identical conditions required in the Olympics themselves. The first day's event was the Prix Des Nations, a jumping contest in the hippodrome, conforming to the F. E. I. restrictions of no wings, variety in type of obstacle and measurements in height and spread of jumps. On this first day the set-up of jumps in the hippodrome was as follows:

OBSTACLES OF FIRST PRIX DES NATIONS COURSE

Type and Height of Obstacle

1. Maryland fence, 4′ 3″; 2. Double post and rail, 4′ 6″ by 4′ wide; 3. plank fence, 4′ 9″; 4. water, 14′ 0″; 5. Aiken, 5′ 3″; 6. Tennessee Stake and Rider, 4′ 9″; 7. Worm fence, 4′ 6″; 8. Bank and rail, 4′ 9″; 9. Double Rustic gate, 4′ 6″ by 4′ wide; 10. Rail over hedge, 4′ 9″; 11. Water, 16′ 0″; 12. Chicken coop, 5′ 0″; 13. Polish gate, 4′ 9″; 14. Double oxer, 4′ 6″ by 6′ 0″ wide; 15. Bar beyond hedge, 3′ 3″ by 5′ 0″ wide; 16. Stile, 4′ 9″; 17. Ditch and Bank, 4′ 0″ by 6′ 0″ wide; 18. Rail after bank, 5′ 6″.

We saw the first day's performances. There were to be two more tests later in the week following at two-day intervals. There were 20 contestants and there were four clean performances. This is the sort of jumping that we are all

*Reprinted from the Middleburg *Chronicle*.

familiar with at the Inter-American or New York Horse Shows.

But it was the three-day event that must particularly appeal to a foxhunter. The horses ridden in this event had come to the school as four year old remounts. These remounts were broken and schooled according to the established schedule of training, and then as six year olds were prepared especially for the endurance ride of the three-day event. The first day's test was to prove the suppleness of the horse, his balance and his control by his rider. The striking feature was that horses fit and ready for the 22-mile endurance test of the second day and "high" as they must be for that, could come into the riding hall on the first day and give the smooth and accurate schooling performance that they did. This schooling did not go into high school or dressage, but simply the elementary schooling that every remount gets at this school before he goes on to be a charger. A change of gaits, change of leads, halting, backing, false galloping, etc.—all done on a course marked by markers, no commands, just smooth, silent accurate movement from one element to the next, and all completed within eleven minutes. A surprising performance for a horse under any conditions, but particularly for horses as "tight" as these were and had to be for the job the next day. There were ten contestants in this event, and if I remember rightly, eight out of the ten horses were clean bred, and they were big, upstanding, sleek looking thoroughbreds. These movements, particularly the change of gaits, accomplished two purposes. First, the suppling and balancing of the horse; and second, control. These officers could make their mounts do what they wanted them to do. Isn't this what we call manners in hunter classes, and what judges are looking for in the show ring? Isn't it one of the most important elements in the hunting field? And wouldn't the hunting field be more pleasant and comfortable and safer if all our hunters could have this basic education? While these horses were being trained for chargers, after all there is little difference fundamentally between a good charger and a good hunter, possibly the former by virtue of his work with troops and in formations must be a little more precise in his movements; but what goes for control of one should be most helpful in the control of the other. The best charger that I ever had, lately proved to be one of my best hunters. These officers trained their own mounts. How many foxhunters can do it? How many "makers" of hunters can do it or do do it? Has the training of hunters made the same progress since the Great War as has the training of chargers? What one sees at Riley is quite provocative of this sort of querying.

Now what do these three-day horses have to do the second day? This test is to show the endurance of a good charger or hunter when well trained and brought to its best condition. It is also a test of the rider's knowledge of pace and of the use of his horse across country, and in one phase has the element of speed. The riders rode at a minimum weight of 165 pounds, alone and at five minute intervals; but outside assistance during the test, as well as taking the obstacles in pairs or being led by another rider or any previous inspection of the course were all prohibited. This course of 22 miles, to be completed without pause, was divided into five phases: 4 miles over roads or paths at the rate of 9 miles an hour; the second phase was 2½ miles over a steeplechase course of 4½ foot brush jumps including a water jump and a liverpool with a time allowance of six minutes, 40 seconds. Two horses finished this phase in five minutes, and forty-four seconds, thus securing them the maximum bonus of 36 points. The third was nine miles at the same rate as the first phase and was over roads or paths indicated on a map that every officer carried. The fourth phase was five miles which called for galloping at a stiff hunting pace. This was over steep, rolling country and the course included 35 jumps. I rode the course and examined each and all of these jumps and it was by all odds the longest and toughest hunter trial course I have ever seen. These jumps were solid and included hedges, ditches, farm gates, brooks, water jumps, road crossings, and I remember particularly a 24-foot in and out, which on the "in" had a ditch on the far side, and on the "out" had a ditch on the near side. There were jumps uphill and downhill. The jumps averaged 3′ 9″ in height with a width not exceeding 13′ 2″. The last phase was a mile and a half with six minutes to finish, and all those that I saw finish, finished galloping, and as I checked the records of the veterinarian present all were marked—"finished strong, condition excellent."

On the following morning I attended the examination of these horses by the committee as prescribed in the rules of the F. E. I. Among other tests was trotting on a hard asphalt road where only one turned up "gimpy" on this test and was eliminated. The other contestants on the afternoon of the third day about 4:30 P.M. took the final test of the three-day event, namely, the jumping test. This test was designed solely to demonstrate that on the day after a great effort the horse retains that suppleness and energy required by a charger or hunter to continue in service. This jumping test was put on in the hippodrome over some fifteen obstacles which in appearance looked very much like those in the Prix Des Nations, but were not so high nor so broad. There was a railroad crossing with the tracks in the middle of it; there was an in and out with a rail fence followed by a worm fence; there was a water jump, a double oxer; a triple bar, stone wall with riders, etc. All these horses went boldly in this jumping test, and one of the most interesting things to me was the fact that the winner was a big, upstanding brown thoroughbred by "Gordon Russell," a very popular sire with the school, and that this horse was schooled and trained by Captain Drake of the Army team. Unfortunately, Captain Drake was taken ill a few days before the three-day event and so could not ride. He turned his string, namely, King-Hi in the Prix Des Nations, and Reno Ike in the three-day event, over to Major Cole, captain of the team, to ride for him. Major Cole, though, weighing twenty pounds more than Captain Drake, took Reno Ike through the three-day to win. He also had a clean performance on King-Hi on the first day of the Prix des Nations. This seems to me to be

a tribute not only to the horse and to the sound and thorough schooling by its trainer, but also to the skill of the new rider, and above all a tribute to a system which can produce this result.

These are but random shots at some of the high spots in the various equestrian events in which the United States Olympic equestrian team is being selected. I only saw officers of the cavalry and field artillery competing in these tests. However, the try-outs were open to all, both military and civilian entries. The qualifications for civilian candidates was simply that the applicant must be an amateur and American, and must be eligible under the rules of the International Equestrian Federation and the American Horse Show Association. To me these trials suggested several things for us all to think about. Are we progressing far enough in our hunter training to qualify civilians for these trials and for them to ride on our Olympic teams? Can the "makers" of our hunters give them the preliminary basic schooling that makes for suppleness and balance and control? And if they can is it the time element alone that keeps them from doing it? On the other hand are our Army Officers progressing fast and far enough to come east and compete with our horses in some of our leading brush or timber races? Whatever the answers to these queries may be, this much I do know, that those who continue to think of the army in terms of $165.00 horses must undergo a complete revision of that opinion or be very much out of date. The Olympic Trials this year as put on at Fort Riley was a really great equestrian show with fine horses and fine horsemanship, a credit to any mounted service in any country, an exhibition of which any American citizen would and should be proud.

Hearing Officers Think

By A DOGFACE who has trouble that way, himself

EDITOR'S NOTE: Colonel Groniger, Commanding the 11th Cavalry, expressed the idea that someone ought to write an article on "hearing" his officers think. The Colonel approved, and evidently enjoyed, this effort by a non-commissioned member of his staff. Perhaps others may.

First of all, please understand this little piece was composed in response to a direct order, and while there are often a number of ways of complying to direct orders, especially in delicate matters such as "Tell that------ fool to keep his group closed up!" the case at hand should be treated openly—or it will lose its punch.

There is a certain amount of malicious satisfaction to be obtained from seeing a superior "sweat one out," as a Godless stable-buck might phrase it, but at the same time your relish over another's embarrassment in the way of military growls is always tinged slightly with the fear that you may be next. (Almost invariably *I am* next, anyhow.) If you are a connoisseur of embarrassing moments you will recognize the symptoms:

(1) The type that gives an involuntary start and then creeps out with a smile that's meant to be apologetic but actually is just silly-looking.

(2) The type who shifts his feet and shows a sudden and consuming interest in some small pebbles near his left toe.

(3) The type (he probably bluffed his way through school) who waits three counts and then says, brightly: "Would you mind repeating the question, sir?"

And you can bet, three-to-one, that all of the above will start their answer with the word: WELL, or the Anglo-saxon noise: UH.

Now for some specific cases:

Case One: The sad plight of Lieutenant Jernigan, who never could learn that Colonel Lear did not like his junior officers to stroll past Headquarters with their hands in their pockets. Colonel Lear, whose whisper was often mistaken for the Pacific Grove foghorn, would raise his office window with a premonitory crash and yell: "Mr. Jernigan!" (pause for effect—and the seagulls on municipal pier take startled flight) "Report to the Post Tailor and have those pockets sewn up!" You could see and hear the lieutenant think that one out.

Case Two: Consider the unfortunate situation in which Captain Shotwell found himself when, while testifying in a case, he was interrupted by the JA, who told the stenographer: "Never mind taking down all those 'Er's' and 'Ah's,' Sergeant. Just get the words in between."

Case Three: Said Lieutenant Griffith to Sergeant Smith: "Did you check the air in the Scout Car tires?" Said Sergeant Smith (who should have been properly ashamed of himself), "No sir." Whereat Lieutenant Griffith declared with a little heat: "You shouldn't have to be told to do these things. Get on it right away."—And Captain Nelson, who could be very caustic on occasion, arrived on the scene in time to remind Mr. Griffith that scout cars do not have pneumatic tires. A neat point, that!

Case Four: The look on Captain Stockton's face, accentuated by the flickering light of the C. P. lantern, when Major McGuire, the head umpire, declared: "You old fool, you think you're always right." I don't know what the answer to that one is, and it was a full two weeks before Captain Stockton recovered. But then, they say the best lodge meeting speeches are made going home in the taxi.

Case Five: (We'll blame the horse for this one) General Kromer bought a bunch of apples for his horse. Quoth he to the Colonel: "Does your horse like apples?" The Colonel didn't have the slightest idea—you could almost hear him trying to think—so he hesitated and then 'llowed as how his horse simply doted on apples. The General fished an apple out of the sack and gave it to the Colonel and the Colonel gave it to the horse; that is he tried to, but the horse wasn't having any, thank you, and the Colonel's efforts toward a forced feeding were unavailing. Moral: Don't look a gift apple in the horse's mouth, or something.

Case Six: Then there was the incident in which Captain George turned the question around and asked: "Colonel, what would *you* do if your patrol encountered a scout car on the road?" . . . (And right now I'm wondering if this essay isn't getting a little out of hand. But I can't help wondering, too, about what the Colonel would have done about that scout car.)

There are other historic cases in the regiment, cases too numerous for mention here. And while I have purposely omitted reference to bloomers pulled by our little friends, the reserve officers, there is one incident that cannot be overlooked. It concerns the worthy Sergeant Kanehl of the Scout Car section. That over-worked gang of irreverent grease-monkeys was heading down the road at Ord when Kanehl's lead car passed a group of Civilian Soldiers. Plop! and a more or less fresh egg spread its yellow insides over the seat of the car. It was a mortar shot and its effects were startling. Kanehl's driver slammed on the brakes and the sergeant dismounted "en masse." (By that I mean he was mad enough for a platoon in poison oak and no chow.) "Who's in command here," bellowed Kanehl, and the silence which followed was deafening. You could hear those gentlemen think! They were given ten minutes of Sergeant Kanehl's best, and it was a case of a citation or a court-martial. I believe the excuse for the target practice was that the R.O.'s were trying out hand grenade technique! It would make a Mills bomb blush.

All in all, I don't think we ought to blame the motherly old lady at the County Fair here a few years ago who pointed to the scout car antennae and asked, sweetly: "And this, young man, is this carried in memory of the old buggy whip?"

Time to Wake Up

Comments of an EARNEST GROUCH

This is a very critical article, and the criticism is not limited to the constructive, due to the limitation of the knowledge of the author.

Germany has recently overrun Poland, in one of the most sweeping, quickest victories in the history of the world. What had Poland for defense? According to *Time Magazine,* over two million men: a tremendous army. Poland also had a very considerable time to prepare herself, for the Germans gave ample warning of their intentions. And, lastly, the war was fought over the ground that the Polish army had designed itself to fight over, wide plains cut through by few roads.

The prime mover of the German attack may be said to have been the gasoline motor, in the air and on the ground; the basis of the Polish defense was the man, propelled only by his legs or by a horse. There are available, at this writing, no detailed accounts of clashes between mechanized and unmechanized troops, but there is available the salient fact that the army whose destructive, striking effort was based on mechanization, aviation, and motorized infantry and artillery swept the enemy from the battlefield. It is to be admitted that other factors entered into the case, but the prime fact, as stated, remains.

I give information from the July-August issue of the CAVALRY JOURNAL. Poland was possessed of one of the largest cavalry forces in the world, forty regiments, 15.5% of her active forces. No regiments were mechanized. Polish cavalry was maintained at fully recruited war strength, surely an advantageous policy. The remount supply was practically unlimited. The excellence of the training of this cavalry remains pretty much of an unknown matter, but the article, in same July-August issue of the JOURNAL, entitled "Training of Modern Cavalry for War—Polish Cavalry Doctrine" seems entirely practical and up to date, envisages practice in training against hostile mechanization certainly to an extent not practiced by our cavalry. It is a significant fact that many of our officers did not have time to read the article before the Polish cavalry was removed from the list of the military forces of Europe.

There is no intention here of laying the entire blame for the Polish defeat upon her cavalry, but it is nevertheless apparent that forty regiments of *regular* cavalry, aware of the threat of enemy mechanization and therefore presumably trained to fight it, were unable to delay the enemy sufficiently to permit the infantry to prepare anything approaching "impregnable" positions.

Now consider the United States cavalry.

Our cavalry labors under many unfortunate circumstances.

1. Is our leadership up to snuff? How many officers do

you know that you feel are entirely inadequate, mentally or physically, to perform efficiently even the routine duties of the cavalry commander in campaign? On the other hand, how large is the proportion of officers that are up to the swift decision and tactical brilliance that are *requisites* of the modern cavalry leader? Perhaps the cavalry does not occupy a sufficiently strong position in our army to permit itself some right of rejection in the selection of its officers, as does the Air Corps, but this does not indicate that every graduate of West Point is necessarily a suitable cavalryman, nor does it alleviate the condition whereby large numbers of officers retain their commissions in the cavalry without evidencing the slightest degree of interest in either its tactical efficiency, its strategic possibilities, or even in the off-duty hour enjoyment of its means of locomotion, the horse.

2. The unit strength is too low. Not only are we at reduced peace strength, instead of war strength—we use the soldiers we have in the interests of housekeeping rather than of training. The fault is not all ours, for the Army would come under the greatest criticism if our posts were not "beautified," our lawns trimmed and our flower gardens well arranged. On the other hand, it is not necessary to over-emphasize this phase of our duty, as we certainly do. I venture to say that the efficiency rating of the unit commander (particularly if he be the post commander as well) is based ninety per cent upon the physical aspect of his plant and upon his housekeeping as judged by the division or corps area inspector, with a haphazard ten per cent allotted to the efficiency of his troops, which last is judged by the breeziest of tactical inspections, or upon casual consideration of the execution of perhaps one operation (of the score that cavalry troops should be capable of executing) during the annual maneuvers. It is logical that the emphasis on housekeeping should be passed down to the troop commander, so that that individual, to keep his own shirttail clean, as well as to satisfy the post and regimental demands for special duty and labor, has at hand not more than 25 or 35 per cent of his command available for daily training. Therefore we must maintain three or four cavalrymen to provide one to receive a daily dose of training for war. It is a poor investment. The most obvious solution to this is the attachment, to each post in the regular army, a CCC company, to drive the ice wagons, prune the trees, and clip the lawns. A wiser, more economical use of the CCC cannot be imagined. But a more attainable rectification would be the shift of emphasis, in our daily duty, to its proper place, which is training for battle.

3. Our enlisted turn-over is so rapid as to make proper training almost a difficult matter. This turn-over, combined with special duty and fatigue, has the constant effect of limiting our training almost to that given the recruit. Our troops change in personnel almost from day to day, with the consequence that we never feel that the men are sufficiently trained in the basic subjects to permit advancing to the more complicated ones; we are restrained from tackling the ramifications of the night attack because of the more pressing need of instruction in the bare elements of extended order drill.

4. Our cavalry is so badly scattered that practice in the proper use of cavalry masses is rarely to be had.

The above listed are the great hindrances to combat efficiency under which the cavalryman-of-the-line must labor. It is quite true that other branches have similar difficulties, but the conduct of cavalry in battle is so complex, so demanding of keen tactical insight and the swift boldness that is the result thereof, that lack of facilities and proper conditions for the thorough training that shall provide us with the ability to meet *any* situation is particularly catastrophic in our case. Infantry or artillery that is poorly led is bound to be inefficient, apt to be severely punished; cavalry badly led, because of its vulnerability and because of the very mobility and flexibility that are its great assets, shall probably be destroyed.

Cavalry must be trained to fight against each of the other arms, with emphasis laid on the mobile ground forces. The complexities of these various types of training are too many and varied to be listed here. The fate of Poland has focused our attention on the case of horse cavalry faced with large masses of mechanization. When considering the problem it is evading the issue to fall back on the old dodge that the best defense against mechanization is superior friendly mechanization, for of course we cannot depend upon horse cavalry being so lavishly supported under normal conditions.

In the first half of September the Polish cavalry must have had to undergo each of these operations against hostile mechanization: 1. quick defense, 2. stationary defense, 3. delaying action, 4. reconnaissance, 5 counterreconnaissance, 6. daylight attack, and 7. night attack. It may be illuminating to determine the combat efficiency of the organization (regiment, squadron, or troop) to which the reader is now, or was last, attached, by contemplating each of the above listed operations in these lights: the effectiveness of the weapons allotted by the table of organization (it won't be easy to borrow weapons from the higher echelons), and the amount of *actual practice* the organization has had in the solution of these problems within the last year.

If sufficient actual practice, upon the ground, has been accomplished recently, the organization must have developed a technique in the matters mentioned herewith. Assuming the organization to be a rifle troop, supported (if lucky) by two squads of its own choosing from the special weapons troop, what system has proved most practicable to:

Blockade a road? Felling trees with the corporal's handaxe would not be easy, but it might work.

Defend a blockade?

Stop tanks at a distance? Would the fifty caliber machine gun stop them? The one pounder? I have never seen the ammunition for either gun that would crack even the old wartime whippet. Maybe there is a better ammunition, that will do the work, but how many officers of the line have fired it? It would be comforting to see

proof of a weapon's effectiveness before the time comes to stake the outcome of an engagement upon it.

Destroy tanks at close range? It has been reported that, in Spain, tanks were destroyed by bottles of gasoline smashed against the side, followed by grenades. How much grenade throwing do we practice? Where do we expect to get grenades? How frequently do we practice short range fire at targets simulating slots in armor?

These are matters that must be worked out with some care and imagination. It would do well to try these more extensive exercises:

The ambush of an enemy mechanized patrol of two or three tanks or armored cars. How would the vehicles themselves be captured or destroyed?

Assuming that an enemy force has been halted by a road blockade, the attack on that force.

The night attack, including not only the very difficult operation of getting the platoons and supporting guns in position, and launching the attack, but also the actual technique of destroying the enemy personnel and machines once their lines, or bivouac, has been entered.

The capture or destruction of enemy supply columns.

The set-up of a system of security that will prevent surprise attacks of the command in march, or in bivouac, plus an "automatic" system of quick defense against sudden raids.

This brief paper has stated (in, maybe, a slightly hysterical vein) a large number of problems that demand solution, with little or no attempt to suggest the solutions. There is no intent to suggest that cavalry must confine itself, tactically speaking, to anti-mechanization measures, but it is intended to show that cavalry must be prepared to face, with great efficiency, this threat, or else suffer its other capabilities to be nullified by the one weakness.

Somehow, German mechanization managed to push the Polish Army and its cavalry all over the map. It's time we developed an aggressive defense that will prevent the same fate from overtaking us. As a grouch, I think it's time to wake up.

Horse and Motor for Artillery

By MAJOR GENERAL R. M. DANFORD, *Chief of Field Artillery, U. S. Army**

At this time, it seems appropriate for me again to make a few remarks with reference to the oft recurring argument of horse versus motor, and to state my views thereon.

I have frequently remarked that I believe the easiest thing the Field Artillery could accomplish today would be to eliminate the horse completely from the army. Congress and the Country are definitely machine-minded and many brilliant officers simply cannot see horse-drawn Field Artillery except as a relic of a bygone day. Student officers at our service schools, and commanders and umpires in our maneuvers, do not like to be slowed down by horse-drawn artillery. In our map rooms we magnify the importance of strategic mobility, while we ignore almost completely, bad weather, bottomless roads, and their effect on battlefield mobility.

It is my belief that in war every means and agency procurable will be utilized in the prosecution of the war. It is conceivable that, as in the last war, the steel capacity of our country cannot satisfy the well nigh insatiable demand for airplanes, tanks, motor vehicles, guns, ammunition, bombs, manufacturing machinery, civilian needs, etc., and that someone in authority will say to the then Chief of Field Artillery, "Animals can be used by you—this country's horse population is enormous. You must plan to utilize it to the fullest extent possible."

I can see no argument about this matter myself. The motor is far superior to the horse in some situations, while the horse is superior to the motor in others. For light division artillery, the horse still remains superior as a prime mover off roads through the mud, the darkness and the rain. He does not scrape open his belly on a rock, he does not fall off an embankment, he does not smash his head against a tree, and he still works a bit longer when his fodder is exhausted.

In other words, the horse can be used by us, and he still remains superior to the motor in what are usually the most difficult situations involving the emplacement of guns to support the jump-off of the Division Infantry at dawn. To discard him during peace in favor of the motor, 100 per cent, is simply putting all our eggs in one basket, and is, in my judgment, an unsound policy. There is today a minimum of argument regarding this matter within the Field Artillery itself. We have pretty well accepted the idea that with the National Guard essentially 100 per cent motorized, the Regular Field Artillery officer is not "horse or motor" but he is "horse and motor," and must qualify himself to utilize both to their maximum degree of efficiency.

*Reprinted from *The Rider and Driver.*

Letters to the Editor

Dear Sir:

I received your request about my writing an article on the rôle and the employment of the mobile forces with mechanized and horsed elements for publication in The Cavalry Journal.

I should like very much to send you a study concerning this subject, but I cannot do this just now, because *I must wait till the experiences of the just finished Polish War are known.*

The mechanized elements in the air as well as on the ground have had first rate successes owing to the fine weather and the dry condition of the roads. The horsed cavalry has also done very well, as I have heard, but I do not know any details yet.

Therefore I think it is better to wait a while till I know more of the newest war experiences before I write anything more on this subject.

I beg you to remember me kindly to Brigade General Hamilton S. Hawkins, and I am

Max von Poseck.
General der Kavallerie a.D.

✦ ✦ ✦

Dear Sir:

I was passing a second-hand book-stall here a week or two back and saw a copy of your Cavalry Journal hanging on the wall, and after a short inspection took it home; I had never heard of The Journal *before*. I compliment you on a fine job, but hasten to add, I am not a cavalryman, or indeed, *much* of a soldier. I was born in England. My father was in the British Army, and served in India through the Mutiny, and afterwards in the camel corps that was organized to chase down the robber bands into which the mutineers broke up. Afterwards he bought his discharge from the army, and went into the Native Police as a District Inspector, having 11 years in India to his credit, after which the climate got him, and he had to resign. For myself, in '98 I enlisted in the 6th Pennsylvania Volunteers, but we were among the unfortunates who did not get out of the country. In '14, when the war broke out, I was not at first interested; I had lived in the United States 17 years by that time, and the "pull" was not very strong, beside which, everyone knew the war would be over before the Canadians got to the front; I made one or two trips to Vancouver, but thought the recruiting sergeants to be somewhat indifferent. However, after the Somme started in '16 the situation was quite different, and in the fall of that year I went up and enlisted and was over in France before the United States declared war. I had chosen the Field Engineers, and got my sergeant's school certificate with them, but I was then 46, and they would not send men over 40 to France in the Engineers, so I had to transfer to the Railway Troops to get across. So we were building narrow-gauge affairs from railhead up to the artillery for ammunition and such. So it was necessary, but not very glorious, but a fine experience for all that. We were down at the Hindenburg Line the day the 27th and 30th United States broke through it with the Aussies in support, and on several occasions the United States engineers took over work from us when we were moved.

Back home, for a while I was not interested much in reading about it, but when the *great argument* came up as to who "won the war"(!!!) it was necessary to get informed! So I now have a small library of both British and United States campaigns. Among them is Speare's *Liaison,* dealing with the retreat from Mons and the question whether the French let the British down or the British the French. The number of your Journal I picked up was the May-June, and when I saw Major Schwein's article "Did They Know How" that settled its purchase at once! But the copy is in rather bad shape (it has been in the hands of a number of people since I gathered it in), so I order another, and also the previous number in which the article "They Didn't Know How" appeared. Personally, I think they knew how from the school books but didn't know how in the field—but there: Don't quote me as Authority!! My experiences were limited to the "iron horse"!!

Cavalry Combat I saw reviewed somewhere or other some time ago, but did not know where it could be got, so The Journal settled that too, so here I am with an order for same.

Yours truly,

William Wykes.

✦ ✦ ✦

Dear Sir:

In view of the many excellent articles on marching, marches and march schedules, may I offer a simple formula that reduces figuring to a minimum.

Where one finds it difficult to keep to a certain set march schedule it helps to know how many minutes one must trot to make the required rate.

By substituting in the formula given below the number of minutes required at the trot during any marching hour can be determined.

$$R \times 12 - \frac{4}{5} M \text{ equals } T$$

Where R equals rate of march in miles per hour
M equals minutes in hour marched
T equals number of minutes necessary at trot to make rate required

Example 1. R equals 5 m.p.h.
T equals 55 minutes
$5 \times 12 - \frac{4}{5}\ 55$ equals T
$60 - 44$ equals T
T equals 16

or it is necessary to trot sixteen minutes during this hour to make 5 m.p.h.

Example 2. R equals 6 m.p.h.
T equals 50 minutes
$6 \times 12 - \frac{4}{5}\ 50$ equals T
$72 - 40$ equals T
T equals 32 minutes necessary at the trot during this hour to make 6 m.p.h.

All that is necessary is to keep the record of the number of minutes trotted. No score cards are needed. Of course this is assuming that the trot is at the rate of nine miles per hour and the rest of the marching minutes are at a four m.p.h. walk—which unfortunately in most cases is not correct.

In reverse if one has kept a record of the minutes at the trot one can tell his rate of march: e.g.

$X \times 12 - \frac{4}{5}\ 50$ equals 16
12 X equals 16 plus 40 equals 56
X equals 4.66, rate for this hour.

Maybe this formula can be proven incorrect. I doubt it. I did not originate the formula but have used it to advantage many times.

PAUL D. HARKINS,
Captain, 3d Cavalry.

The Horse in Poland

(Reprinted from Sankt Georg, Germany, October, 1939)

The German advance into Poland was so rapid that it broke down enemy resistance and paved the way for the troops that followed the armored forces to accomplish a work that was unexpected and unheard of before.

All cavalry will be interested in the part which the horse played on the German side in the Polish campaign. In this connection we may state without any exaggeration that the rapid advance of the army would have been impossible without the horse and, furthermore, that horses proved their worth in the manner that was expected. To be sure, the significance of the motorized and mechanized forces is unquestionable, but cavalry formations, which made up only a relative small part of the army following the motorized troops, moved at almost the same rate of speed. We know that each of our infantry regiments has approximately 500 horses and that most of our artillery is horse drawn. In accordance with the communications of the headquarters staff of the Wehrmacht in its report dealing with the campaign in Poland five armies took part in the great decision. According to this, we may assume on the basis of a superficial effort that Germany used more than 200,000 horses in the campaign in Poland and that this large number made possible the pace of advance of the attacking armies. Exact numbers engaged and losses due to enemy action or other causes will not be announced until later.

We are told that during the first eighteen days the horses could not be unharnessed nor unsaddled, and in view of the distances covered and the rapidity of the advance, this is not surprising.

In the tactical organization of the army, independent operational activity had not been planned for large cavalry units, *but in spite of this* the cavalry accomplished a great deal, including excellent work in reconnaissance.

The report of the headquarters staff dealing with the campaign recognized cavalry in a special manner by saying: "By their magnificent coöperation, motorized and armored units, cavalry, antiarmor defense, and reconnaissance units, all came up fully to our expectations. We hear that division commanders expressed particular appreciation of the activity of their cavalry in their reports to the Fuehrer who was on the battlefield with his soldiers. We also have reports of conspicuous cavalry actions by separate squadrons. As an example, a squadron in the South Army, led by a well known race horse rider, boldly attacked a Polish battery set up on difficult terrain (in a great vineyard, rising terrace-like) and captured it. The losses were small in spite of a direct hit within the squadron."

When the weather (which during the main was extremely favorable and did not offer any obstacles to the advance of the motorized and mechanized units) became bad during the final concluding operations, cavalry and horse drawn battalions came more into their own.

The experience which troops gained in horse upkeep and training in preparation for the large scale Polish operations must have been extraordinary and should give a good basis for work in the future. In the care and training of the cavalry horse the most important thing is keeping the horse in proper condition at all times even during peace.

A Mobile Team

In commenting on the results of the 1st Cavalry Division Maneuvers conducted last month, Major General Kenyon A. Joyce stated:

"Reports we have received relative to a recent campaign in Europe, which our phrase-makers have termed 'lightning war,' have demonstrated that the ideal combination to achieve the requisite tempo is that of the mechanized forces to seize desired terrain, and horse cavalry to follow immediately for the consolidating and holding of acquired positions until the permanent infantry holding force can be brought up. This combination of the steel spear head of mechanized fighting vehicles and horse cavalry is an ideal one for a rapid thrust into enemy territory. These two elements constitute a team that has a manifest rôle in modern combat. And this team supplemented by infantry pushed forward either by complete motor movement or by foot and shuttle movement will insure success in any except war that is a stalemate."

Poland

The letter received from General Maximilian von Poseck, former Chief of Cavalry of the German Army, which appears in "Letters to the Editor," is not without interest in its reference to the campaign in Poland during September, 1939. General von Poseck emphasizes the fact that sufficient data is not yet available upon which to draw conclusive lessons. As reports accumulate, however, from various sources all appear to confirm the impression that the success of this campaign resulted from the age-old coördinated efforts by all arms and services. It was the infantry, primarily, which cracked the cordon defense established by the Poles. Breaches created by the infantry permitted the rapid debouchment of the mobile forces which led to the rapid disintegration of the defensive army. Again, close coördination between the ground forces and the air arm accelerated and made possible the successful accomplishments. It appears to have been the irresistible power of coördinated effort well planned and closely synchronized. Reports from Poland carried in preceding pages of this issue of the JOURNAL afford a general glimpse of what actually transpired.

Contributions

Proxy cards, issued in connection with the annual meeting of the Cavalry Association, will include again this year a query as to the article or type of article which aroused the interest of readers of The CAVALRY JOURNAL. It has been a matter of editorial cognizance that articles dealing with the technique of the cavalry arm have been scarce during the past several months. Those cavalrymen who feel that they have ideas which warrant further consideration by others on any phase of cavalry tactics are urged to present them for further dissemination. Supporting fires, dismounted combat, covering forces, and a score of other subjects might come under such a category.

Flank vs. Frontal Attacks

During the past several years much attention has been paid by us to the subject of flank attacks. Does not the term, flank attack, envisage striking an enemy who is unprepared to resist an attack in the area in which it strikes? If an enemy is prepared to meet an attack from any given direction, can it be called a flank attack; rather, is it not, in reality, another frontal attack? Accordingly, an attack which incorporates the meaning of the term must be essentially one based on surprise. Again, is not surprise made possible by an element which, by virtue of its mobility, can place itself in position to launch its force from an unexpected direction and position at an unexpected time? Upon this basis, it would appear without argument that the arm most capable of inflicting a flank attack is the highly mobile one.

Human Importance

The most contented human being is the one who senses a spirit of self-importance with the task in which he is involved. In a foregoing article in this issue of The CAVALRY JOURNAL there appears the observation that we are inclined to restrict initiative among subordinates. The mere cultivation of a sense of importance primarily would suggest the formulation of this atmosphere by every means possible.

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The CHIEF of CAVALRY

Extends to the Officers and Enlisted Men of the Cavalry the Season's Greetings, and Best Wishes for the New Year.

' ' '

Honor Roll

The following organizations occupy a place on the Cavalry Honor Roll by maintaining 100% membership in the Cavalry Association:

National Guard:

103d Cavalry
104th Cavalry
106th Cavalry (Michigan Component)
108th Cavalry (Georgia Component)
112th Cavalry
113th Cavalry
114th Cavalry
Headquarters, and Headquarters Troop, 52d Cavalry Brigade
Headquarters, and Headquarters Troop, 57th Cavalry Brigade
Headquarters, and Headquarters Troop, 24th Cavalry Division

Organized Reserves:

308th Cavalry (72% Membership, highest in that component).

Of the Regular Army commissioned personnel, 98% are members of the Cavalry Association.

The United States Cavalry Association

Organized November 9, 1885

The aim and purpose of the Association shall be to disseminate knowledge of the military art and science, to promote the professional improvement of its members, and to preserve and foster the spirit, the traditions, and the solidarity of the Cavalry of the Army of the United States.—Article III of the Constitution.

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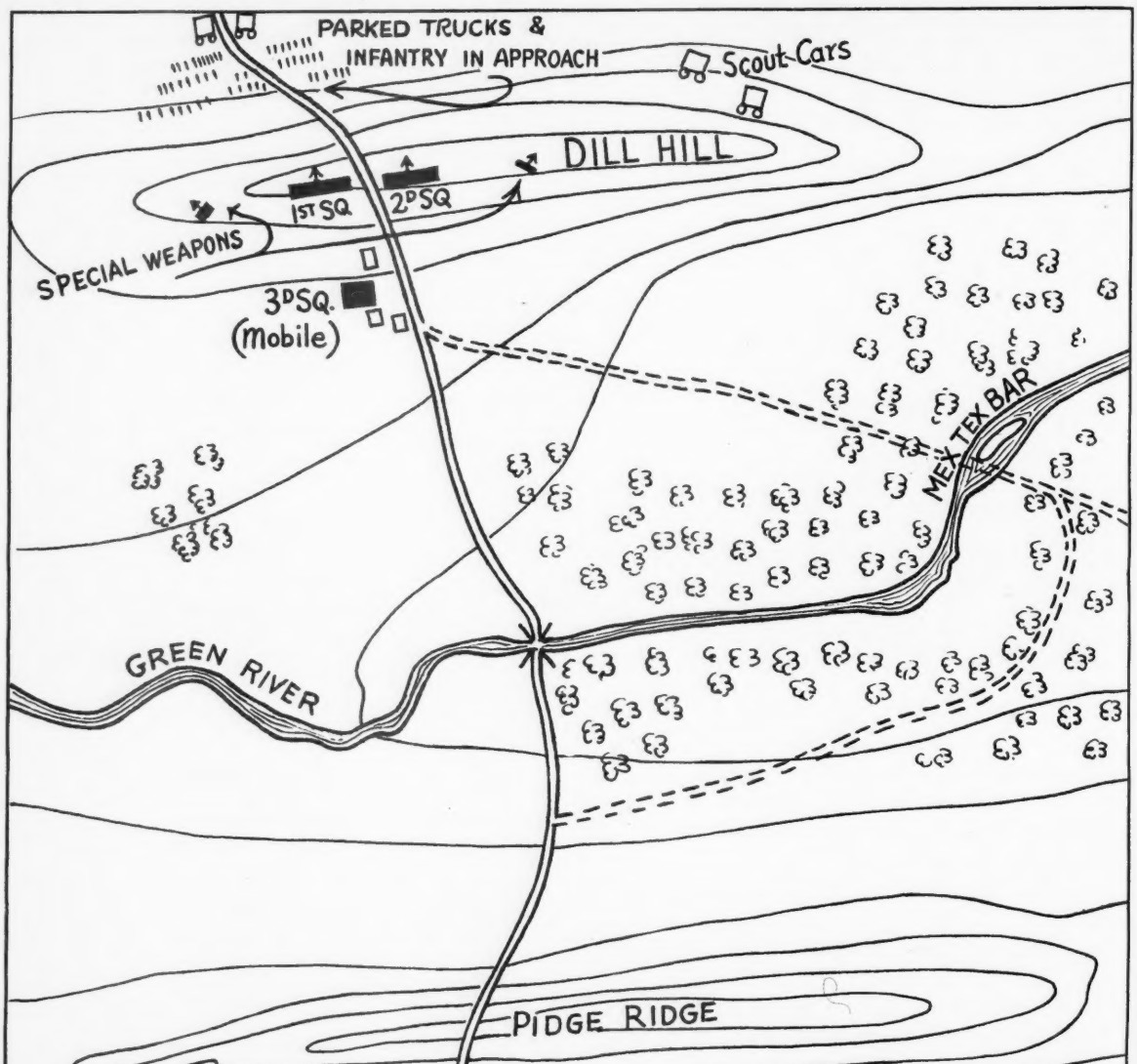
THE CAVALRY JOURNAL is published under the auspices of the Cavalry Association. It is not an official publication. Articles appearing in the JOURNAL represent the personal views of the author and are published to stimulate interest in, provoke thought on, and provide a free forum for the decorous discussion of cavalry affairs. In no wise do contributions appearing in the JOURNAL reflect official thought or indorsement.

SUBSCRIPTION RATE: $3.00 per year, payable in advance. Foreign postage, 50c additional.

CHANGE OF ADDRESS: Prompt notification of change of address to the Editorial Office is requested.

NOTES *from the* CHIEF *of* CAVALRY



What Would You Do?

The regimental command car, its windward side stained with a mixture of saliva and Navy Plug, (the result of Old Man Rivers' carelessness when under nervous tension) had taken excellent cover near the crest of DILL HILL. Old Man Rivers, oblivious to the crackle of rifle and machine gun fire from his 1st and 2d Squadrons, was in an expansive mood.

"Major Spavin," he smirked to his trusty S-3, "this business of delaying a brigade of infantry in trucks over a poor road net is scarcely worthy of our talents. By to-

night those brass hats will know that our special weapons troop can knock out the Red mechanized security elements, and after that a mere boy can . . . ."

"Excuse me, sir," broke in Major Jeeman, the S-2, agitatedly, "don't you think its time we withdrew from this position? Those doughs are getting pretty close. In another fifteen minutes they'll be . . . ."

"Oh, nuts, Jeeman," said Old Man Rivers, waving his half empty bottle of tequila disgustedly, "their scout car units are all shot, twice we've held them with squadrons abreast for over an hour, and now they're hardly out of their trucks and deployed. Damn it, I've a notion to stay dismounted and simply outwalk those birds . . . ."

CRASH SPLASH

The bottle of Jose Cuervo, shattered by a wandering machine gun bullet, lay in its own nauseous fumes on the car floor. Old Man Rivers stared at it in horror.

"Odd amytal!" he cried, for the old gentleman had a smattering of pharmacy, "that settles it. Driver, more tequila!"

The driver, scarcely moving his cud of Copenhagen, reached under the cowling to a cunningly improvised section of old artillery caisson and silently passed over another bottle of the noxious cactus juice from a generously stocked supply.

"We're off, boys," cried Old Man Rivers. "Jeeman, tell the 3d Squadron to move back at once to—to—to, oh, hell, Spavin, this is too easy. Suppose you try some of your Leavenworth talents on planning this next little piece of action. I'll get mounted and you can have the command car. Give you good experience. This time I want 'em not only delayed but socked hard, and remember that Green River is easily fordable through those thin woods over near Mex-Tex Bar."

Gentle reader, as trusty Jack Spavin, the S-3,

WHAT WOULD YOU DO?

(For solution see below)

Annual Meeting

The annual meeting of the United States Cavalry Association will be held at the Army and Navy Club, Washington, D. C., at 8:00 P.M., Monday, January 15, 1940.

Formal notification, together with proxy cards, will be sent to all members of the Association within the continental limits of the United States. Members who will be unable to be present are requested to return the proxy cards promptly to the Secretary, United States Cavalry Association, 1624 H Street, N.W., Washington, D. C.

What Would You Do?

SOLUTION

Major Jack Spavin sent a messenger to Captain Paul Beltfeed, instructing him to have one platoon of his .30 cal. machine gun troop report to the 3d (reserve) Squadron at once for attachment thereto. Spavin then had the command car driven to the 3d Squadron and spoke to its commander.

"Splint," he said, "the Old Man and the executive officer want me to handle the next move so's they can kill another bottle of Cuervo. There'll be a platoon of 30's here in a few minutes to reinforce you. Move back at ten miles an hour to PIDGE RIDGE, astride the road, cover the withdrawal of the rest of the regiment and delay the Reds from that position.

"I am going to lead the other squadrons over the Green River Bridge. At that point the remainder of the machine gun troops (including special weapons) will join you as soon as our withdrawal is assured. Then I'll move fast over to Mex-Tex Bar, ford the river, and wait in assembly positions in the woods. When I hear you open fire I'll advance with view to attacking the column in rear if they remain in the trucks, or making a harassing attack if they deploy. We'll all rendezvous at a point three miles south on this road in case of trouble. Any questions?"

Spavin then sent messengers to the 1st and 2d Squadrons, directing them to withdraw at once leaving small covering groups and to assemble on the road behind DILL HILL. The machine guns and special weapons were directed to cover the withdrawal by echelon and to join the rear of the column on the road at increased gaits.

The effectiveness of the attack on the column, delivered from the flank, would depend upon secrecy and surprise. If these conditions obtained, great damage and delay might be inflicted. If conditions were not favorable, the regiment could be reassembled, either on PIDGE RIDGE or a more southern point and a temporary position defense adopted.

The action of Jack Spavin, pinch hitting for Old Man Rivers, shows the variety of plans open to a cavalry command in delaying a force which, though more mobile on roads is less mobile when maneuvering for a dismounted approach.

Obvious Conclusions

I have been told that I am considered by the enthusiasts for mechanization as hostile to the development of mechanized force in our army. This is not true. But I am decidedly hostile to the ideas of those who would replace cavalry by mechanization. I believe that mechanized cavalry can be of great assistance to horse cavalry and that, despite the opinions of some officers, horse cavalry and mechanized cavalry can and must be used advantageously in close conjunction. It may be true that a few organizations resembling the German Panzer Divisions might be useful. Especially so, if the opposing forces have no cavalry properly armed and trained and with sufficient numbers. The Panzer Division is a combination of tanks, motorized infantry, motorized artillery, antitank units and motorcyclists. Against an enemy unprepared to meet and check such a force, as was the case in Poland, it will be successful for certain jobs on suitable terrain.

Should it happen that the French and British Armies are forced to retreat by a sudden powerful thrust by German forces on the Western Front in Europe, as happened in 1914, the Allies will rue the day when they suppressed their cavalry. Their mechanized forces will not be able to replace a properly constituted cavalry including antitank units for protecting the retreat of their infantry. Mechanized forces cannot fight delaying actions as well as cavalry. Their only effective means of fighting is by attack. Against the pursuit of superior forces, such a means would entail complete sacrifice for a short delay.

On the other hand, cavalry, by its noiseless movement across country, its mobility in any country, its capacity for stealth and concealment, can make harassing attacks on the flanks of pursuing columns by surprise and with more certainty than can mechanized forces. Furthermore, a cavalry possessing a sufficient armament of antitank guns, can check the pursuit of mechanized forces of the enemy and make its escape to repeat the maneuver again and again.

The mechanized forces of a pursuing army, on suitable terrain and with some luck in regard to the weather, can keep the retreating army on the run with no opportunity to stop, draw breath and reconstitute itself in a better position for defense than it had at the beginning, unless the retreating army has some means of delaying its pursuers. This means must not be limited to the communications system. It must be able to operate independently without having its mobility impaired at all by the nature of any country in which it may be thus employed.

This situation obtained in Poland. The Polish Cavalry was not armed and probably not trained as modern cavalry should be. It was improperly armed with lances, carbines and light machine guns. It had no heavy machine guns, no antitank guns, and lacked other weapons that we believe indispensable for cavalry. Its conception of cavalry rôles must, therefore, have been different from ours. It was not organized into divisions with the necessary supporting arms. The Polish mobilization was not completed, and it was interfered with by the sudden attack of German air force. It is probable, therefore, that the Polish Cavalry did not number more than twenty thousand if that much. Wholely insufficient in numbers, it was scattered across the entire front against a German army of a million men.

Furthermore, if the Polish infantry divisions were not numerous enough or sufficiently well armed and trained to take advantage of the assistance that a proper cavalry could have given, there was no hope for their armies even if they had had such a cavalry.

The Poles were simply overwhelmed by superior forces acting in a huge double envelopment made possible by the geographical situation. And neither the German mechanized forces nor the lack of Polish cavalry or air force, can be held alone responsible for the quick defeat. Any further prolongation of the campaign was made impossible by the Russian attack in the rear. There is no use, therefore, in trying to prove anything for or against any branch of the service by reference to the Polish campaign. It seems to have been true that the German Panzer divisions, without any important opposition and favored by a very special terrain, carried out missions often entrusted to cavalry. But this was affected only because of these conditions. Cavalry divisions could have done the same thing in the same time, not only under these conditions but on any terrain, in any weather, and against real opposition.

But the point desired to make in this article is that our cavalry should be expanded and increased so that with the increase proposed in the regular army, there may be several cavalry divisions. Whatever may be the importance of mechanized organizations and whatever may be the character of the organization believed wise for our mechanization, there should be no doubt as to the necessity for these cavalry divisions. I refer, of course, to what is now termed "horse cavalry." Two regiments of our cavalry have been mechanized, and we have only ten tiny regiments left, each of which is the size of a squadron. In

time of peace we need about thirty or more squadrons in order to have three divisions ready to take the field when needed. In a major emergency this would not be more than half enough.

With full agreement as to the value of mechanized troops, as demonstrated in Poland under extraordinary conditions, including vast treeless plains and dry weather in a usually wet season, and backed up by overwhelming forces of all arms, it is true nevertheless that cavalry has qualities which make it indispensable, especially in America.

The characteristics or qualities of cavalry determine its rôle. But these qualities vary in different countries. The armament and training of any cavalry service affects its usefulness and, therefore, its employment very materially. The armament and training of our cavalry are designed for its employment in the Western Hemisphere. It possesses qualities specially applicable to this hemisphere. It is believed that these qualities in European cavalry would also be useful and extend its rôle very much. But, however, we are not concerned with that. If we ever have to use our army, it is anticipated that it will be on this side of the Atlantic.

Should we have to use our armed forces in America, the need for a cavalry such as ours assumes large proportions. Every possible theater of operations in the Western Hemisphere favors the use of cavalry under any conditions of climate, weather, soil, plains or mountains, forests or deserts, creeks or rivers, cultivated or uncultivated lands, good roads or poor roads or no roads, sparsely settled or thickly inhabited areas. None of these things affect seriously the use of cavalry although they do affect the usefulness of motorized and mechanized forces slightly or very seriously according to the manner in which they may be combined and in accordance with other conditions that may obtain in any given situation.

The many uses for cavalry are independent of the need for mechanization, and often the two can be used advantageously in conjunction. But there are some conditions which make cavalry of special importance. They exist in every country, but particularly in the American continents. The very great variety of terrain, in limited areas as well as in vast spaces, the differences in the network of roads, the character of the different populations and many other considerations require a mobile arm possessing the general qualities for service under all conditions that may be listed for American cavalry in comparison with other arms as follows:

Cavalry Qualities Compared to Other Arms.

1. Cavalry is the most *mobile* of all military forces *across country*, day or night.
2. Cavalry is better able to *disperse* rapidly into small units and to reassemble quickly.
3. Cavalry is *less vulnerable to airplane attack*.
4. Cavalry moves across country with *less noise* than vehicles of any kind.
5. Cavalry is more suitable for *close reconnaissance* and *exploration* of broken country, woods, valleys, hills and mountains, than any mechanized forces.
6. Cavalry is nearly equal to infantry in *fire power*, including antitank guns.
7. Cavalry, like infantry, can fight *offensively or defensively*. It is more suitable for quick and decisive actions and less suitable for prolonged actions. The many short defensive actions that cavalry is called upon to make in the conduct of its many rôles indicate that this quality of effective defensive ability is of the greatest importance. Mechanized forces lack this quality.
8. Cavalry in offensive action has *more varied methods of attack*, mounted, dismounted, or a combination of the two.
9. Cavalry, like infantry, can operate for a few days, if necessary, without food, water, gas or oil.
10. Cavalry, like other arms, can be transported by railroad or motor trucks to the rear vicinity of the theater of maneuver. Upon arrival in that theater or zone, cavalry takes on its special qualities.

With these qualities in the cavalry, no large column could afford to undertake any serious military campaigns in this hemisphere without the inclusion of a cavalry force in the command. As often said before, a mechanized element in this cavalry force would be very helpful. Cavalry and mechanized force can be used to coöperate with each other. Mechanized force should not be tied to the shoestrings of a cavalry commander. And therefore, we should not expect it always to be held within supporting distance of cavalry forces. But when mechanized force is used to make wide encirclements of the hostile flanks or rear, its final destination or location in a position just previous to the general attack should be close to the position held by the cavalry immediately preliminary to the cavalry attack. This may not be called conjunction, but it means coöperation. Wholly independent missions far beyond supporting distance of other troops should not be assigned to mechanized forces. The Panzer divisions in Poland were supported closely by motorized infantry, and there is increasing evidence that cavalry supported those mechanized organizations with very satisfactory results.

Delaying actions form a very important part of cavalry rôles. They are of particular importance in the defense of this continent. Cavalry, which can operate in any weather, over any terrain, night and day, is the best force for such service.

The armament and supporting forces as provided or planned for our horse cavalry are or should be as follows:

1st. Rifles, the same as used in the infantry. Not carbines.

2nd. Automatic pistols, caliber .45, 7 cartridges in magazine. One pistol, or perhaps two, for each trooper. One carried in a holster on the trooper's belt, and perhaps the other in a holster secured on the pommel of the saddle.

3rd. Heavy machine guns, caliber .30, carried on pack

horses and organized into Troops and Squadrons.

4th. Heavy machine guns, caliber .50, for antitank defense. A few of these should be carried in the Scout Cars of each regiment, and the greater number should be organized into separate units, Troops and Squadrons, and carried partly in Scout Cars and partly on pack horses.

5th. Light antitank cannon. Carried either on motor vehicles or on wheeled carriages drawn by teams of horses. These should be organized into Troops.

6th. Possible weapons for special campaigns and according to the character of the country. These include short, heavy cutting weapons somewhat like the bolo, and perhaps hand grenades.

7th. Attached batteries of antiaircraft guns as found essential for certain operations.

8th. Scout cars, armed with caliber .30 and caliber .50 machine guns. A few assigned to Regiments and the others to special units in Antitanks Squadrons assigned to Brigades.

9th. In cavalry divisions, and sometimes brigades, Horse Artillery, organized into regiments and battalions.

10th. With large units such as a cavalry corps, a brigade of Mechanized Cavalry.

11th. On certain missions of large cavalry units, one or more battalions of Motorized Infantry.

With such a cavalry, mobile across any kind of country in any weather, and with such powerful fire action and fire support, capable of quick dispersion and quick assembly, who can doubt that, with sufficient numbers, cavalry rôles of the most outstanding importance can be performed? *But,* it cannot be improvised. It must be ready.

A Story in Figures

CAVALRY ORGANIZATION AND STRENGTH

1916—Strength: 17,357 enlisted men
Units: 17 regiments
Regiment: 15 troops
total enlisted 1,015

1917—Strength: 35,352 enlisted men
Units: 25 regiments
Regiment: 15 troops
total enlisted 1,007

1918—Strength: 29,000 enlisted men
Units: 25 regiments
Regiment: 15 troops
total enlisted 1,764

1919—Strength: 19,682
Units: 17 regiments
Regiment: 15 troops
total enlisted 1,232

1920—Strength: 20,000 enlisted
Units: 17 regiments
Regiment: 15 troops
total enlisted 1,007

1921—Strength: 11,184 enlisted men
Units: 14 regiments
Regiment: 9 troops
total enlisted 641

1922—Strength: 9,871 enlisted men
Units: 14 regiments
Regiment: no change

1923—No change

1924—Strength: 9,867 enlisted men
Units: 14 regiments
Regiment: no change

1925—No change

1926—Strength: 9,363 enlisted men
Units: 14 regiments
Regiment: no change

1927—Strength: 8,910 enlisted men
Units: 14 regiments
Regiment: no change

1928—Strength: 8,756 enlisted men
Units: 14 regiments
Regiment: 6 troops
total enlisted 690

1929—Strength: 8,636 enlisted men
Units: 14 regiments
Regiment: no change

1930 to 1938—No considerable change.

NOTES FROM THE CAVALRY BOARD

"The Cavalry Board invites any individual, whether or not a cavalryman, to submit for consideration constructive suggestions or ideas relating to new equipment, improvement of standard equipment, or to any problem or project under study by the Board. The Board will also welcome suggestions as to new problems that may properly be considered. Communications should be addressed to the President, Cavalry Board, Fort Riley, Kansas."

60-mm. Mortar and Accessories: The Cavalry Board recently completed a test of pack accessories for transporting the 60-mm. mortar in pack. The mortar pack carries the mortar complete, tool roll with contents and eighteen rounds of ammunition. The ammunition pack carries 30 rounds of ammunition. These accessories showed up well in the test and the board has recommended their adoption for use by the cavalry.

New Gas Cylinder Assembly for M-1 Rifle: A test of a new gas cylinder assembly for the M-1 rifle was recently completed. This test indicated that the M-1 rifle equipped with the new gas cylinder assembly when firing M2 ball functions far better than the rifle equipped with the old gas cylinder assembly using M-1 ball ammunition.

Tripod Mounts, Caliber .30 M2 and Caliber .50 M3: There have been received by the Cavalry Board for test a tripod mount, caliber .30 M2 and a tripod mount, caliber .50 M3, which have been modified to strengthen the spade feet. The test is to determine if the modification for future manufacture is desirable.

Ammunition and Water Chests and Carrying Cases for Caliber .30 Machine Gun: The tests of expendable, caliber .30 machine gun ammunition containers; carrying cases for these containers; and a new type water chest have been completed recently. The ammunition containers are made of thin metal plate and are designed to hold one 250-round belt of ammunition or 300 rounds loaded in metallic clips. The canvas carrying cases are equipped with a shoulder strap and their purpose is for easier transport of ammunition by dismounted men. The water chest is of lighter weight and less capacity than the present standard chest. The purpose of the test was to determine the suitability of this equipment for use with cavalry machine guns.

Light Barrel for Machine Gun, Caliber .30, M1919-A4: In line with attempts to decrease the weight of the present light machine gun, the Cavalry Board has recently received for test a modified barrel. This barrel has been modified by machining down a portion of the barrel in rear of the front bearing. The test is to determine if it can replace the present heavier barrel.

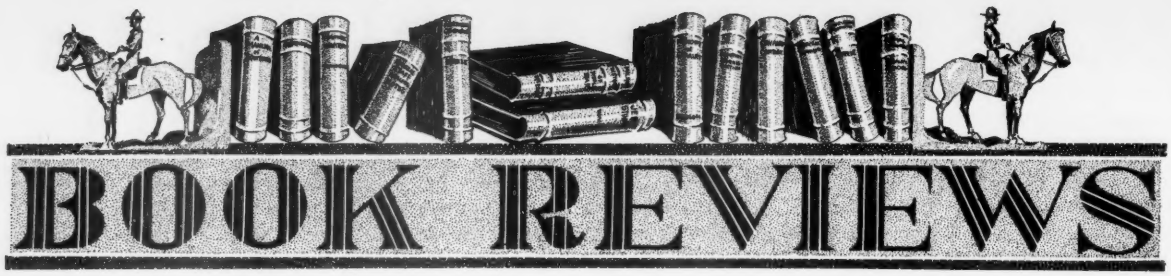
Heavy Barrel for Machine Gun, Caliber .50: The Ordnance Department has sent the Board for test a caliber .50 machine gun barrel which weighs some eleven pounds less than the present 45 inch barrel. It consists of a thin steel tube over which has been drawn an aluminum jacket. While the cost of manufacture is much greater the reduction in weight will be a decided advantage if the barrel proves satisfactory in other respects.

Minor Modifications of M-1 Rifle: In an effort to reduce the number of malfunctions of the M-1 rifle, the Cavalry Board is studying various means of lubrication and the practicability of providing a cover for the breech to prevent the collection of sand and dirt in the working parts. The Board has received a very comprehensive report on this subject from the First Cavalry Division which forms the basis for this study.

Revision of the Cavalry Field Manual: Instructions have been received to prepare a complete revision of the Cavalry Field Manual, Volumes I and III. This project has been under study by the members of the Board for several months and the Academic Division of the Cavalry School is now preparing desirable changes. Suggestions from most of the cavalry regiments have been received which have been of great assistance to the board in its work. Of primary interest is the change to the dismounted drill contained in Basic Field Manual, FM 22-5.

Antigas Equipment for Horses: The Cavalry Board has completed the tests of horse gas masks mentioned in the preceding issue of The Cavalry Journal. The subject of antigas equipment for horses, is, however, one for continual study. At present, the board is concerned with determining the degree to which it is tactically profitable to equip horses with this kind of protective equipment. Do we really want antigas equipment for horses? If the protection afforded by this equipment is adequate; if its use is practical; and if it is essential to the success of cavalry operations, the answer is, of course, yes. So far we have fairly good, though partial, protection for the lungs by the use of the wet type of mask (though even this has not been tested on live horses in real gas). Quite probably a canister type of mask can be developed which will give protection as good as that now afforded the soldier. Research is being made to develop or discover a means of all around protection against the vesicants or mustard gas, but it is difficult to imagine one that will be at once adequate and practicable when considering its impedimenta and loss of time in application. Lacking such a means of protecting the body of the horse, is the adoption of the gas mask alone justified? Possibly by thus protecting the lungs of the horse in a mustardized area we can delay the moment when he will actually become a casualty long enough to make it worth while. And how much value has the mask in an attack by non-persistent agents? To be effective such attacks can be expected to be sudden and the gas laid down in concentrations. Under such conditions, the soldier has been taught to hold his breath long enough to put on

(Continued on page 542)



SEA POWER AND TODAY'S WAR, by Fletcher Pratt. 237 pp. Harris and Hilton Books, New York: $3.00.

This book by the well known military and naval writer, Fletcher Pratt, is a purely technical study of the strength of the sea powers and of their tactics and strategy in the event of a general war.

A considerable portion of the book is devoted to the actual results of the Washington Naval Conference. In the opinion of the author this conference settled nothing but rather served as a basis for subsequent expansion in naval construction by countries which, theretofore, had depended on no more sea power than that required for routine coastal patrol. The final outcome of the conference resulted in a naval construction which was more political in its purpose than in the attainment of genuine naval combat power. This policy was reflected in the construction of what Mr. Pratt hails as the "Paperclads," where armor was sacrificed to speed and gun caliber. World reaction to this trend in naval policy is an interesting portion of this highly interesting volume.

Naval power among the major nations is covered very completely ranging from the supremacy of Great Britain, through the naval forces of France, Italy, Germany, Russia, Japan, and the United States. Throughout, the author maintains close contact with his general theme of the effect of naval power on international affairs and war of today.

References to United States naval power and policy form an absorbing portion of the book. Many may have read Mr. Pratt's comments on this subject which were carried in the *Saturday Evening Post* during the early autumn.

This book constitutes important reading to all military students.

* * *

THE DEFENCE OF BRITAIN, by Liddell Hart. 444 pp. Random House, New York: $3.50.

The general theme of this book is devoted to the advocacy of the active defense under modern conditions rather than the time honored offensive with its attendant losses and sacrifices. In building up his case the author emphasizes the principle that the aggressiveness and power of an army is to be found in its moral base. That base is unsound when the thought permeates an army that needless sacrifices are made for an indecisive objective; that there is a care for flesh and blood which must be more consciously observed on future battlefields. The German army, in the opinion of Captain Hart, pursued only a suicidal policy in their tremendous offensive in the spring and summer of 1918. Had the German high command maintained the defensive preparatory to seeking the proper opportunity for a counter-offensive the final results of the World War might have been different.

As one gets well into the book a number of contemporary problems which face Great Britain are discussed such as "Can Britain Be Invaded," "Sea Defence," "Air Defence," "Antiaircraft Defence." Under air defence, the author meditates on the real effectiveness of air bombardments. He reviews recent air offensives of the past few years and evaluates their effectiveness. The question is propounded as to whether accuracy of bombing has not diminished with the recent growth of speed.

The latter portion of the book is devoted to the reorganization of the British army and to certain aspects of army reform. To this reviewer, this part of the book is not the least interesting. Many questions of army administration, promotion, retirement, etc., might receive as much attention in the United States as in Great Britain.

This book is highly recommended to the military student who would keep abreast of modern trends in military thought.

* * *

A STUDY IN AIR BOMBARDMENT, by Brigadier General Oliver L. Spaulding, U.S.A., Retired. 143 pp. World Peace Foundation, Boston: cloth edition $1.00; paper edition 50c.

General Spaulding confines his comments on this subject to the single field of the bombing of cities from the air. On the general subject of air bombardment voluminous publications have been released, but up to date this is the first work confined to the limited field concerning the bombardment of cities as a whole.

The author opens his discussion with a bit of philosophical background based on the eastern system of philosophy in which quoting from the theme of Ormazd, "Then, in a trial by fire and molten metal, the good will be separated from the evil, and the Kingdom of Heaven will be established forever and ever." A faint foreshadowing of the trial by fire and molten metal may be upon us now in the form of air bombardment.

The author works into the subject in commenting briefly upon the general sense of the term "bombardment" as applied in the terms of past wars including pertinent references to international agreements on this phase of warfare. Referring briefly to World War developments on this theme, General Spaulding goes quickly into a very clear and succinct analysis of the Douhet theory and

its theoretical application to war. To the average military mind it is believed that adequate answers to the Douhet theory will be found in subsequent pages. Actual experiences of the past half dozen years are evaluated in retrospect insofar as the application of Douhet's ideas are concerned. The cost of air raids and their practical accomplishments are ably and thoroughly covered. Ethiopia at once is thrown out as no comparable basis for comparison. The air bombardment of cities in Spain and China have been taken as examples to prove the inadequacy of this type of warfare in achieving decisive results.

The volume concludes with a thoughtful discussion on possible preventive actions to air bombardment and with an appendix devoted to proposed rules for the regulation of aerial warfare drafted by the Commission of Jurists in 1923.

SOLDIERS IN THE SUN, by Captain William T. Sexton. 292 pp. Military Service Publishing Company, Harrisburg: $2.50.

Captain Sexton, perhaps, has produced the first work which covers adequately the participation of the United States in the Philippines.

Starting with the arrival of Admiral Dewey in Manila Bay and the destruction of the Spanish Fleet, this volume covers in satisfactory detail the final control of the Philippine Islands by American arms.

In reading this book one is struck at once with the variety of diplomatic features which face the army officer in an expedition of this type. Difficulties which were encountered in perfecting coöperative and coördinated action between the army and the navy; the pathetic state of preparation for an undertaking of this character; the lack of able leadership; supply problems, and a score of other factors, are brought to light.

Captain Sexton has presented not only a valuable contribution to our military annals, but has given us also a remarkably interesting picture of our colonial development.

FALSE PROPHETS OF PEACE, by W. Armin Linn. 365 pp. Military Service Publishing Company, Harrisburg: $2.00.

The author throughout the entire volume focuses attention on the hysteria which has surrounded our participation in war rather than the fundamental causes which have provoked us to war. He opens his discussion with the War of 1812. Inasmuch as the surface causes which brought about our entrance in that war dealt with foreign restrictions to our shipping it is significant to note the territorial division involved in the desire for war and the desire for peace. In those early days it is pointed out that the states of Vermont, New Hampshire, Pennsylvania, Ohio, and all of the so-called Southern states advocated war, while the representatives from the states of Massachusetts, Rhode Island, Connecticut, New York and New Jersey voted against war. Thus it is seen that the states most involved in seagoing commerce and whose interests were most affected were the very ones who sought peace. Therefore, it was concluded that response to hysteria and propaganda by that part of the country in no way concerned with the real issue were the ones swept into the fever of war.

The remainder of the book approaches each of our several wars in the same fashion. The author emphasizes the fact that in no circumstances could it have been proven that financial, manufacturing, or other interests were concerned with the advocacy for war. To the contrary, these agencies constantly advised peace. The same is true in the political field. Throughout our history the conservatives have advised peace, while the liberals advocated war.

In succumbing to the wiles of those who preach war, few have given heed to the terrific national expense which resulted through a nation unprepared for war. We became in many cases, entangled in war inexcusably brought on through unpreparedness. The Civil War, in particular, would never have transpired had the Federal government had access to adequate armed forces.

In 1865, with an organized army, we easily avoided war in Mexico when our supplications for the removal of foreign soldiery from this continent met immediate response.

The author refers repeatedly to the battle losses which, during our history, have amounted to 1,280,000. Through proper preparedness and a calm regard for genuine national interests our losses could have been kept under 300,000. The general theme of the book is that no nation can *will* peace by talk and the printed word, but rather must earn peace through preparedness and a rugged national policy.

WORDS THAT WON THE WAR, by James R. Mock and Cedric Larson. 356 pp. Princeton University Press: $3.75.

This book describes in detail the activities of the Committee on Public Information, sometimes called the Creel Committee, under the chairmanship of George Creel. Propaganda and counter propaganda were the objectives of this commission.

In considering war propaganda it is well to realize that its purposes are fourfold: (1) to mobilize hatred against the enemy; (2) to preserve the friendship of allies; (3) to preserve the friendship and, if possible, to procure the coöperation of neutrals; (4) to demoralize the enemy. A fifth objective might be included which would aim at the maintenance of a high public morale by stressing the power and success of our own forces while emphasizing the weaknesses and misfortunes of an enemy.

Of the many factors which go to make up a successful combination in the execution of war, propaganda is by far one of the most important. The world today faces the shrewd and crafty demonstration of propaganda agents. Its importance among all nations is registered by the decisive actions taken to influence opposing peoples through

propaganda as exemplified by the English dropping leaflets rather than bombs on Germany during the early days of this war.

The authors, in very complete and satisfactory fashion, have covered the ways and methods by which the Creel Committee operated during the period of World War I. The use of posters, the artifice employed in newspaper releases, the power of censorship, and all other factors are adequately covered.

As great as were the activities of the C.P.I. our next war will see the tasks of a similar organization further complicated by the existence of radio. In the medium of propaganda the radio has afforded revolutionary possibilities, and a real technique for the employment of this instrumentality must be improvised when again we are faced with war.

Messrs. Mock and Larson have contributed a most significant volume to the military student, and its reading is recommended to all who desire a true understanding of the art and employment of propaganda.

HOW STRONG IS BRITAIN? by C. E. Count Puckler. 240 pp. The Veritas Press, New York: $2.50.

Count Puckler is a foremost journalist of Germany who has specialized on British affairs. His estimate of British strength in war has been approved in England as a very fair evaluation.

In the author's introduction, he states that free trade on the commodity market and free movement on the money market have made Great Britain the richest country in the world. The fact that Germany and other countries have determined to rebuild their prosperity from their own resources has tended to upset the sphere of economic freedom in which Great Britain always has operated.

The threatened breakdown in this economic structure may account for the current affairs in the world.

In discussing the economic structure of the British Empire, the author covers very completely the various phases of industry, agriculture, shipping and finance. It is pointed out that Great Britain's early attainments as the leading industrial country by necessity evoked a policy of free trade which gave her tremendous financial prestige and power throughout the world. She early found great benefits in trading manufactured products for raw materials on a scale of trading which invariably resulted in high favorable trade balances. This system produced two results; first, it diminished her own native agriculture; and second, provided her with surplus funds for foreign investment. Today Great Britain has more money invested in foreign regions than any other world power. Count Puckler gives to these foreign investments the term "unseen empire," the returns upon which provide her with an immense financial income. In recent years, however, this unseen empire is weakening due to a growing self sufficiency throughout the world, with the result that Britain's foreign investments gradually are being reduced. From this and other factors the author concludes that Great Britain is becoming financially weaker.

In discussing the British Empire it is pointed out that although, through commercial and industrial markets, the range of empire is a great asset, at the same time its protection has become a seat of increasing weakness. The whole empire is too far reaching to protect at all points. This has influenced British policy in overlooking minor indignities here and there but saving its force for those threats which in themselves might jeopardize the British system and empire. Perhaps the difficulty in protecting a world wide empire has resulted in current conditions where the synchronized efforts of the "have-not" nations, having surveyed the situation, are seeking their own advancements mainly at the expense of the British Empire.

If one seeks information upon which to base an appreciative analysis of British policy this book affords valuable reading.

ONE HUNDRED YEARS AT V.M.I., by Colonel William Couper, with a foreword by General George C. Marshall. 2 Volumes. 705 pp. Garrett and Massie, Richmond: $6.00 for 2 volumes.

Colonel Couper has presented a most complete story on the organization, historical high lights, and constructive services rendered by the Virginia Military Institute.

As General Marshall writes, the traditions and standards evolved over a period of eighty-five years under the leadership of three remarkable characters has permanently endowed the institute with a legacy for the development of future citizens having that stamp of character necessary to the maintenance of a genuine democracy.

The vicissitudes which undoubtedly confronted all American institutions of learning have been discussed and ably developed by the author. The days of the institute during the time that Thomas J. Jackson (Stonewall) was Professor of Natural and Experimental Philosophy is exceptionally interesting reading to the military student.

The second volume is devoted exclusively to the participation of the alumni of V.M.I. in the War Between the States. In covering this historical period many of the outstanding campaigns of the war are adequately covered in an absorbing manner. The influence of the Institute on Confederate arms was so far-reaching that at this distant day it is hard to evaluate its importance until brought home by a work of this type.

The entire work in two volumes is attractively bound, and, throughout, the style and binding bespeak the best in the art of printing.

ATTACK ON AMERICA, by General Arid White. 302 pp. Houghton-Mifflin and Company, Boston: $3.00.

In a fictional manner, General White has drawn up an absorbingly interesting picture of a situation which may confront America someday through the infiltration of hostile elements in an assembly area on this continent.

Cavalry Scout Car on distant reconnaissance. Note camouflage and local security measures.

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THE CAVALRY JOURNAL

1624 H Street, N.W. Washington, D. C.

In this instance it has been assumed that a coalition of European and Asiatic powers plan a joint offensive against the continental United States. The spearhead of the invasion comes from the south. The elements of this spearhead are presumed to have been gradually assembled in Mexico in the strength of 200,000 highly trained, well disciplined, amply equipped force with the most modern means of warfare. Although our intelligence system appears to have been functioning, it was unable to ascertain the true details of this assembly until it was almost ready to strike. At the same time, foreign intentions were not definitely ascertained and prospective movements in force across the Atlantic and Pacific Oceans realized until all preparations were complete.

The theme of the book concerns the lack of means which we possess to restrict a movement of this type. According to the story, the force from Mexico invades Texas with ease and advances as far as the Dallas-Fort Worth area in spite of the bold but useless sacrifice of most of our regular army units and available National Guard elements. Long range bombers bombard the White house, killing the President of the United States and throwing the country into a havoc. Hostile landings are affected on both coasts. Our forces are confined to the Mississippi Valley and the desert plateaus of the far west. Not until we completely reorganized our industry on a war basis and created a highly modernized army were we able to repel the invaders.

The motive of the book is to demonstrate our present weakness and advocate the existence of highly trained, well equipped forces both military and naval.

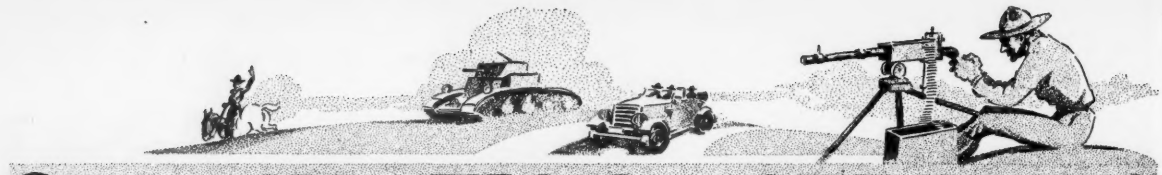
The only fly in the ointment insofar as the author's visualization is concerned might be found in our incredible naïveté in permitting a hostile alignment of this magnitude to exist and to permit the creation of a foreign army on this continent, all to our complete ignorance and prospective lack of retaliatory measures.

* * *

STRAIGHT TIPS FOR "SUBS," by the late Captain H. Trapman. 72 pp. Forster Groom and Company, London: 50c.

This small booklet, in vest pocket size, first appeared during the World War as an aid to British subalterns, furnishing useful data on commissions, allowances, officer's kit, etiquette, duties, official correspondence, etc. So useful have these notes proven that this booklet now appears in its fourteenth edition with a printing of 70,000.

For anyone who may have occasion to come into contact with the British Army and its commissioned personnel this book would be most valuable. It deals very adequately with customs and traditions of the imperial forces, etiquette of the mess, and other features which might prove helpful. In reality, it compares with our "Officer's Manual" or "Officer's Guide" but so condensed as to include all necessary information in a pamphlet so bound as to be easily carried on the person in any convenient pocket.



ORGANIZATION ACTIVITIES

1st Cavalry—Fort Knox, Ky.

COLONEL HENRY W. BAIRD, *Commanding*

Hardly had the First Cavalry arrived at its home station from the Plattsburg Maneuvers, than its elements again began to take the field in furtherance of the Army Recruiting Program. On September 28th Major Harmon and Lieutenant Teller left with a composite detachment en route to Fort Hayes, Ohio. Before returning to Fort Knox, this detachment visited Toledo, Cleveland and Akron, Ohio, returning on the 6th of October. On October 12th Lieutenant Leydecker moved on Bowling Green, Kentucky returning on the 14th. On the 21st Captain Mansfield commanded a detachment which operated from Hartford, Kentucky, while Captain Evans concentrated on the Greenville area. The record shows recruiting parties out from September 28th operating in Kentucky, Indiana, Ohio and West Virginia. The result achieved is reflected in the numerous commendations coming in for the officers and men of the regiment concerned in the work.

On September 30th, Master Sergeant Walter I. Sayad was retired after thirty years service. A regimental review was held in honor of Mr. Sgt. Sayad on September 29th. A devotee of the races, Sgt. Sayad was presented with a pair of field glasses by his old mess mates.

The Cavalry Leadership Test for Small Units, held this year in the Mechanized Brigade, awakened great interest in competitions of this nature. The Regiment congratulates 1st Lt. Philip H. Bethune and his platoon of Troop F fot their fine soldierly victory.

There have been so many changes among commissioned personnel recently that a roster may prove of interest to friends of the First Cavalry.

Colonel Henry W. Baird, Commanding
Lieutenant Colonel Kenna G. Eastham, Post SD Commanding Recruit Replacement and Training Center
Lieutenant Colonel William Nalle, Executive Officer
Lieutenant Colonel Victor W. B. Wales, S-3
Lieutenant Colonel Nelson M. Imboden, Post SD, Post Inspector
Major Ernest N. Harmon, Commanding 1st Squadron
Major Stephen Boon, Jr., Post SD, Post and Brigade S-5
Major Charles H. Unger, Post SD, Acting Post and Brigade Executive Officer
Major Leo B. Conner, Commanding 2nd Squadron
Major George R. McElroy, S-4 and S-5
Captain William L. Barriger, S-1 and C.O. Band
Captain Harold Engerud, Post SD, A&R, Club and Theatre Officer
Captain Charles H. Bryan, Commanding Troop C
Captain Douglas Cameron, Commanding Troop B
Captain Edwin C. Greiner, Commanding Machine Gun Troop
Captain Richard B. Evans, Commanding Troop F
Captain Richard T. Wilson, Post SD, Instructor Brigade Motor School
Captain Wendell Blanchard, Post SD, WPA Mess Officer
Captain Grant A. Williams, Commanding Headquarters Troop, Regimental Communications Officer and S-2.
Captain Thomas F. Van Natta, III, Commanding Service Troop
Captain Clayton J. Mansfield, Commanding Troop E
Captain Wayne J. Dunn, Commanding Troop A
Captain Thomas J. Brennan, Assigned Headquarters Troop
First Lieutenant Donald M. Schorr, Assigned Headquarters Troop
First Lieutenant Philip H. Bethune, Assigned Service Troop
First Lieutenant Graves C. Teller, Assigned Troop A
First Lieutenant Charles E. Leydecker, Assigned Troop C
Second Lieutenant Meyer A. Edwards, Jr., Assigned Machine Gun Troop

The regiment is looking forward to playing an important part in the approaching training period and expansion program of the Army.

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2d Cavalry—Fort Riley, Kans.

COLONEL H. D. CHAMBERLAIN, *Commanding*

One Hundred Years with the Second Cavalry, a complete history of the regiment from the time of its organization to date has just come off the press. The book was compiled and written by Major Joseph I. Lambert, Master Sergeant Joseph A. Carroll, and Staff Sergeant Henry J. Cohrs, and is a complete record of the regiment in the many wars, battles and skirmishes in which it has participated since 1836. The book is now for sale at Regimental Headquarters, Second Cavalry, at $2.50 per copy.

The first two of a series of informal Regimental Horse Shows were held during the months of September and

A couple of dragoons
(Note type and condition of mounts)

October, with four classes in each show, under the general direction of Captain A. A. Frierson. The classes in these shows were designed to bring out new riders and new horses, and have been highly stimulating in improving horsemanship in the regiment. Emphasis has been laid on the correct military seat for officers and men since this seat lessens fatigue to the horse and thus promotes "mobility."

Recruit training within the regiment is now being conducted by the following methods:

Upon arrival, recruits are interviewed and according to qualifications and general physique assigned to troops, the larger men being assigned to Machine Gun Troop. Each troop clothes and equips men assigned them and only the best available equipment may be issued to the newly joined men. They are then consolidated in one troop barracks for messing and quarters, forming a recruit detachment, under the supervision of the regimental recruit instructors, consisting of one commissioned officer and selected non-commissioned officers (depending on the number of recruits). There they undergo a scheduled course of instruction for eight (8) weeks which is based on the War Department Mobilization Training Schedules. These schedules are so arranged as to develop the recruit's ability to use his weapons, and perform the duties required of him in field service concurrently with his development of perfection in the individual phases of training, such as horsemanship, mounted and dismounted drill, and similar subjects. A "Soldier's Catechism" is now being issued to each man in the regiment. This is an invaluable aid in reviewing the fundamental things the recruits should know. The Regimental S-3 closely supervises all recruit training and the recruits of each detachment are inspected by the Commandant, The Cavalry School, and by the Regimental Commander before they are sent to duty with their organizations. Recruits who are not deemed proficient are set back for further training.

Training in the regiment as a whole during this period is directed toward the objective of presenting superior demonstrations for the Cavalry School, while maintaining such standards in the regiment as will permit it to function with maximum efficiency as a combat regiment in the field. Particular stress is being laid on combined training with the artillery and air corps.

Among the many rumors that are afloat at this time, is one that the 4th Cavalry from Fort Meade, South Dakota, the 14th Cavalry (less the 1st Squadron), from Fort Des Moines, Iowa, and the 10th Cavalry from Fort Leavenworth, Kansas, will be concentrated at Fort Riley. This will provide a marvelous opportunity for training of some of the elements of the 2d Cavalry Division for the first time since its organization. The 2d Dragoons extend a hearty welcome to these regiments and hope to make their stay with us a very pleasant one. More recently we hear that all troops are to go to Camp Joseph T. Robinson, at Little Rock, Arkansas. Whatever materializes, we look forward to a full winter training period.

On August 29, 1939, the old saying, "Once a cavalry man, always a cavalry man" was demonstrated when Maynard A. Hooper, son of Master Sergeant Hooper, Second Cavalry, enlisted in Headquarters and Service Troop. Master Sergeant Hooper first enlisted at Jefferson Barracks, Missouri, on December 30, 1912, and has performed his entire service with the 2d Cavalry. Private Hooper was reared with the regiment. During childhood, he could be seen mounted on a pony, riding with the regiment on marches and maneuvers, and learning to take hard knocks like the veteran trooper, his father. Private Hooper completed his recruit instruction in an outstanding manner on October 20, and was sent to duty with his organization, Headquarters and Service Troop, 2d Cavalry. (See photograph herewith.)

Troop "A" Second Cavalry sent its second dragoon drill platoon to the American Royal Live Stock Show, which was held in Kansas City, Missouri, between October 14th and 22nd. They gave two exhibitions daily before most appreciative audiences. The men wore the uniforms of the period of the Mexican War. With matched black horses going through the cadenced movements, and with bugles blowing and guidons rippling, their brilliant appearance drew round after round of applause. In Kansas City, the dragoons made many friends for themselves and the Cavalry.

On Saturday, October 21st, the regiment conducted a week-end practice march from Fort Riley, to Manhattan, Kansas. Arriving in Manhattan, camp was established in Sunset Park. Recruiting posters were displayed and a write up was given the regiment in the local papers. On Sunday, a dinner was given by troops of the regiment for

the officers, enlisted men, their families and guests. At 1:30 P.M. following the dinner, a program consisting of shoe races, hay rolling, 3 legged races, 50 yard dash, tug of war, and four boxing bouts of three rounds each, by selected men of the regiment was presented. The final event was a battle royal by the recruits of the regiment. An estimated crowd of 3,000 Manhattanites were present during the afternoon to witness these events and they were enjoyed by all. The regiment returned to the Post on the morning of October 23rd.

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1st Squadron, 3d Cavalry— Fort Ethan Allen, Vt.

LIEUTENANT COLONEL S. V. CONSTANT, *Commanding*

The squadron was well settled down to its normal routine of fall training, after its return from the First Army Maneuvers, when it came time to prepare for the Montreal Horse Show. Preparation for participation in the show had begun when the war in Europe upset the plans of the 17th Duke of York's Royal Canadian Hussars, the sponsors of the Montreal Show. The show had to be called off because of Canada's entrance into the conflict. This left the squadron with only the Boston Horse Show, sponsored by the 110th Cavalry, Massachusetts National Guard, to look forward to.

The normal practice jumping sessions were held and all of the mounts were gotten into condition for the coming contests. The horses, eight in number, were shipped on Tuesday so that they would be well rested before the show on Thursday. They were shipped in four squadron trucks and were accompanied by 9 enlisted men including the drivers of the trucks. Captain T. C. Wenzlaff was in command of the truck convoy. The other officers that were to participate in the show, Lieutenant Colonel S. V. Constant, commanding the squadron, First Lieutenant R. E. McCabe, Second Lieutenant T. B. Harrington, Second Lieutenant W. A. Sussmann, and Second Lieutenant L. H. Cross, drove to Boston on Wednesday afternoon. On the way down they were stopped by the Massachusetts State Police who had a message for Colonel Constant. All officers were to return at once to Fort Ethan Allen to take over the duties of Post Administration, as the 7th Field Artillery had been ordered to Fort Benning, Georgia, for divisional training. Before the start for home was made, however, another message was received saying that the day of departure for the Artillery had been postponed and the squadron officers and men might stay for the show.

The efforts of the riders of the squadron were crowned with success, as they won every individual and team event in the military classes. They also won and placed in some of the open classes. The following is a list of the classes and the places won by the squadron:

1. Riding Competition for children 12 to 16 years—3rd place won by Tommy Constant, son of Lieutenant Colonel and Mrs. S. V. Constant.

2. A.S.P.C.A. Horsemanship Event—2d place won by Tommy Constant, son of Lieutenant Colonel and Mrs. S. V. Constant.

3. Novice Hunter—2d place won by Captain T. C. Wenzlaff on *Milly Russell,* 4th place won by Sergeant Roy Wood on *Hailstone.*

4. Lightweight Hunter — won by Captain T. C. Wenzlaff on *Milly Russell.*

5. Heavyweight Hunter—2d place won by Lieutenant Colonel S. V. Constant on *High Time.*

6. Working Hunter—4th place won by Sergeant Roy Wood on *Hailstone.*

7. Handy Hunter—2d place won by First Lieutenant R. E. McCabe on *Black Beauty.*

8. Scurry—won by First Lieutenant R. E. McCabe on *Black Beauty* whose time was 0.1 of a second better than the winner of the 2d place; 3d place won by Second Lieutenant L. H. Cross on *Bernice* whose time was 0.6 of a second greater than that of the winner.

9. Pair of Jumpers—won by First Lieutenant McCabe on *Black Beauty* and Second Lieutenant L. H. Cross on *Bernice.*

10. Teams of Three Jumpers (Open)—3d place won by Lieutenant Colonel S. V. Constant on *High Time,* Captain T. C. Wenzlaff on *Milly Russell,* and Sergeant Roy Wood on *Hailstone;* 4th place won by First Lieutenant R. E. McCabe on *Black Beauty,* Second Lieutenant T. B. Harrington on *Blue Belle,* and Second Lieutenant L. H. Cross on *Bernice.*

11. The William H. Danforth Trophy, Officers' Jumping—won by Second Lieutenant T. B. Harrington on *Blue Belle;* 3d place won by Captain T. C. Wenzlaff on *Milly Russell,* and 4th place won by Lieutenant Colonel S. V. Constant on *High Time.*

12. The Lieutenant Gunnar F. Fredrikson Memorial Trophy—Teams of Three—won by Lieutenant Colonel S. V. Constant on *High Time,* Captain T. C. Wenzlaff on *Milly Russell,* and First Lieutenant R. E. McCabe on *Black Beauty.* Second place won by Second Lieutenant T. B. Harrington on *Blue Belle,* Second Lieutenant W. A. Sussmann on *Razor Back,* and Second Lieutenant L. H. Cross on *Bernice.*

13. Military Teams of Three—won by Lieutenant Colonel S. V. Constant on *High Time,* Captain T. C. Wenzlaff on *Milly Russell,* and First Lieutenant R. E. McCabe on *Black Beauty;* 3d place won by Second Lieutenant T. B. Harrington on *Blue Belle,* Second Lieutenant W. A. Sussmann on *Razor Back,* and Second Lieutenant L. H. Cross on *Bernice.*

14. Pair Jumping, Military—won by First Lieutenant R. E. McCabe on *Black Beauty* and Second Lieutenant L. H. Cross on *Bernice;* 3d place won by Lieutenant Colonel S. V. Constant on *High Time* and Captain T. C. Wenzlaff on *Milly Russell;* 4th place won by Second Lieutenant T. B. Harrington on *Blue Belle* and Second Lieutenant W. A. Sussmann on *Razor Back.*

All in all the riders of the squadron won four trophies and a total of 39 ribbons.

Just as soon as the show was over all officers and men that attended came back to Fort Ethan Allen and began to get accustomed to their new jobs of Post Administration made necessary by the fact that the squadron has to run the entire post during the absence of the 7th Field Artillery at Fort Benning.

The duties of running the post are quite exacting, but the squadron manages to find some time to get in a bit of training. The squadron is now ready to settle down to a long, cold Vermont winter and looks forward with keen anticipation to the coming snow hikes, winter gymkhanas and to its summer camp at Underhill, Vermont.

6th Cavalry—Fort Oglethorpe, Ga.

COLONEL JOHN MILLIKIN, *Commanding*

The social life of the regiment and garrison has been recently enriched by the additional new personalities found in our many late arrivals and their respective families. A lively interest has also been injected into the military phase of garrison life during the past month by the addition of a series of afternoon parades, night horse shows and the culmination of a wide scope of varying events into a military tournament which was well attended by many of our civilian friends in Chattanooga and vicinity. Late arrivals in the social life of the garrison include Captains William O. Heacock and Thomas F. Taylor and their families as well as many others mentioned in earlier issues of the JOURNAL.

Major Wilkie C. Burt, 2d Cavalry, a former officer of the regiment and Mrs. Burt, a resident of this vicinity honored us with their presence at certain periods when the health of Major Burt permitted, during the past several weeks. Major Burt has departed for the Army and Navy Hospital, Hot Springs, Arkansas, for observation and treatment and carries with him our best wishes for an uneventful and speedy recovery.

First Lieutenant William R. Prince the last of our "stay-at-homes" to receive orders for change of station departed October 1st for his new assignment, the 2d Balloon Squadron, Fort Bragg, North Carolina.

Hardly becoming settled after his arrival for station Second Lieutenant Richard L. Irby received orders to proceed to the 1st Cavalry Division, Fort Clark, Texas, and departed for his new station October 25th.

TRAINING

Starting on October 1st, troops of the 6th Cavalry, renewed their individual and unit training after the lapse caused by six weeks in the field, followed by summer training camps and range practice. To insure the swing and perfection of dismounted marching, short daily periods of marching accompanied by the band were carried out throughout the month. Two dismounted retreat parades, are being held each week—regimental parade on Thursday and squadron parade on Tuesday. Mounted work included the school of squad, platoon and troop.

The target season completed during the past two months was most satisfactory. Regimental qualifications in arms were as follows:

Rifle	100%
Pistol, Dismounted	85.3%
Pistol, Mounted	92.4%
Light Machine Gun	93.2%
Heavy Machine Gun	100%

Regimental champions in use of small arms in the regiment for the 1939 target season are:

Rifle—Private First Class Tyler, Troop B—Score 246.

Pistol, Dismounted — Private Emory R. Stapleton, Headquarters and Service Troop—Score 96.83%.

Light Machine Gun—Private First Class Roscoe S. Edens, Troop A—Score 259.

Heavy Machine Gun—Private First Class Herman E. Arthur, Machine Gun Troop—Score 197.

Seven men of the regiment had perfect scores in firing the pistol mounted. The regimental champion, pistol mounted, will be determined by a competitive match to be held during the month of November.

HUNT NOTES

The first formal hunt of the season was held on October 22d. The Band played hunting selections while the mounted buglers escorted the pack and hunt staff around the post to the commanding officers' quarters. Here the staff, pack, and field received Colonel Millikin for his first hunt with the 6th Cavalry hounds. In spite of the extremely dry, warm weather the 12½ couples worked out the line beautifully to a kill near Snodgrass house. The hunt was followed by the first hunt breakfast of the season. On October 29th the new farming section west of the park was hunted and will be used almost exclusively from now on until the "going is too deep" from rain. A total of 51 fences have been panelled in this section which takes in Missionary Ridge and comprises an area equal to that of Chickamauga Park. The extreme western section is the home of the foxes and it is hoped that soon we will give some of them some excitement and exercise.

On Friday, September 29th, the 6th Cavalry turned out in a farewell retreat formation in honor of Master Sergeant William Turner, who retired with over thirty years service on September 30th. At this formation the general order announcing Master Sergeant Turner's retirement was published and the regimental commander, Colonel John Millikin, in a short address extended to Master Sergeant Turner the congratulations and best wishes of the regiment.

ATHLETICS

After a very successful baseball season, Troop F, winner of the regular schedule, came out on top in the Shaughnessy play-off.

A lighted softball field was built adjacent to the post and proved to be one of most popular "night spots" on the post. Although started late in the season, two leagues

were organized and their schedules completed. In the Fast Pitch League Troop F was the winner. In the Slow Pitch League Troop B finished first.

HORSE SHOW WEEK

The week October 15-19, 1939, was set aside as a Military Horse Show and Tournament Week. Starting off on Sunday, October 15th, with a drag hunt in the morning and a polo game between the Atlanta Horse Guards and Fort Oglethorpe in the afternoon. The post team defeating the Horse Guards by a score of 11 to 4. On Tuesday the final game of the baseball league was played between Troop F and Headquarters Troop. On Wednesday afternoon the Bradley County Colts of Cleveland, Tennessee, and the Fort Oglethorpe Juniors met in a polo game with the post Juniors winning by a score of 8 to 3. Between the halves of the polo games the Machine Gun Troop put on a machine gun demonstration. On Thursday the hunter trials were held in Greenleaf Area. Captain B. McK. Greeley, 6th Cavalry, won the Qualified Hunter Class and the Staff Team of the Fort Oglethorpe Hunt, composed of Captains Gordon B. Rogers, John O'D. Murtaugh and B. McK. Greeley, won the Hunt Team Class. The two night horse shows drew a large crowd of spectators. Jumping classes were held in the Horse Show Arena on Friday and Saturday nights, interspersed with tandem drills by Troop A, a bridleless ride by Troop B, a musical drill by Troop F and novelty jumping by Troop E.

Troop E won the much coveted Reid Trophy having accumulated the most points throughout the year in the bi-weekly horse shows beginning with the point to point ride of the hunt in April.

7th Cavalry—Fort Bliss, Texas

COLONEL WILLIAM W. WEST, *Commanding*

On the fourth, the regiment returned to the post after participating in the 1st Cavalry Division Maneuvers held in the vicinity of Toyahvale, Texas. Ideal weather conditions made the maneuver period of five weeks a most pleasant experience. The regimental commander was very much gratified over the high state of training exhibited by all organizations. Excellent horsemastership in all troops enabled the regiment to evacuate the least number of animals of any organization in the division. The regiment was represented in three weights in the finals of the division boxing tournament (Private Conley, Troop B, featherweight; Private Marshall, Troop B, lightweight; Private Balarezo, Machine Gun Troop, middleweight). Private Conley won his fight to land one division championship for the Garrys.

As soon as the officers had a chance to get rid of some of the maneuver dust, polo started. The pony string was split up and reassigned to take care of the large number of players who turned out. Every effort is being made by Colonel Allen and Lieutenant Wilson to develop new ponies for the winter and spring tournaments. Noel Field under Major Haydon's care is about ready for play, and in the meanwhile the other two post fields are in excellent condition.

Because of the changes made necessary to take care of the 1st Cavalry Brigade, the remount stables have been broken up. The remounts were assigned to troops for stabling and further training. The officers of the regiment had a very informal party in McKilligan Canyon prior to the maneuvers. All former Garry Owens were invited, and needless to say a good time was had by all. The regiment sponsors the hop at the Officers' Mess on December 16th. The committee appointed to arrange and plan the affair promises the best dance of the year.

When the 1st Brigade arrived on the post, this regiment was host to the 12th Cavalry. Troops of the 7th Cavalry had the corresponding troops of the 12th in for their first meal. The officers were entertained at lunch at the Officers' Mess.

8th Cavalry—Fort Bliss, Texas

COLONEL JOS. P. ALESHIRE, *Commanding*

Captain Rogers A. Gardner was relieved from assignment to our regiment and departed for duty at the Overseas Discharge and Replacement Depot, Fort McDowell, California, on September 1, 1939. This was Captain Gardner's second tour of duty with the 8th Cavalry.

Captain Alexander M. Miller, III, joined us for duty and is commanding Headquarters and Service Troop.

The following recent graduates of West Point reported for duty in time to be with us on the recent division maneuver in the Balmorhea Area:

Lieutenant E. McC. Dannemiller,
Lieutenant H. L. Conner, Jr.,
Lieutenant J. J. Wilson,
Lieutenant F. W. Boye, Jr.

During the month of September, the troops of the regiment moved from the barracks area that has been "home" for the past fourteen years. Additional barracks and stables had been completed in the new 2d Cavalry Brigade Area. At the present the entire brigade is quartered in the new area at the south end of the post.

The entire month of September was devoted to preparation of men and animals for the annual maneuvers of the 1st Cavalry Division.

A retreat parade was held on September 29th, at which time Sergeant Oliver D. Milton, Troop E, was presented with the Cavalry Pistol Team Medal, which he won in the inter-regimental rifle and pistol matches held at Fort Clark, Texas, May 9th-11th this year. Sergeant Milton is one of the outstanding rifle and pistol shots of the regiment, being an annual attendant at the Camp Perry Matches, where he has won a splendid collection of medals and trophies as a result of his skill with rifle and pistol.

At the same parade Private Barney F. Leonard, also of Troop E, was presented with a gold medal for the high

new pistol shot in the inter-regimental matches. This was Private Leonard's first experience in match shooting, and he shows prospects of following in the footsteps of his able instructor, Sergeant Milton.

On October 2d, the regiment, as part of the 2d Cavalry Brigade departed for Balmorhea, Texas, for maneuvers of the 1st Cavalry Division. Ten days were used in the march to the Base Camp, Sunday being spent in Van Horn, Texas. We arrived in Base Camp on October 11th, and enjoyed a rest until the 16th when the division maneuvered against an enemy represented by flags.

After two days of division exercise the two brigades were pitted against each other. In the beginning of the phase each brigade was required to make a night march to a position unknown to the opposing brigade. The 2d Brigade marched 28 miles to the Kingston Ranch, arriving in bivouac at 2:05 AM. Much to the chagrin of the air corps, the march was completed without their observer being able to locate the two columns of the brigade or our bivouac. After a hard-fought, three-day war, both brigades returned to the Base Camp. Again the following week a two-day division exercise was held. Following this, the division was in combat against an infantry combat team composed of the 9th Infantry and the 15th Field Artillery both from Fort Sam Houston, Texas.

On October 28th, a review was held in which all branches present took part. Immediately following the review, troops of the 2d Brigade again hit the road, on our return march, arriving at Fort Bliss on November 4th. During the entire period we enjoyed excellent weather.

Forty animals were evacuated, and three deaths were caused by exhaustion. The excellent condition of both men and animals caused much favorable comment.

Every member of the regiment deeply regrets the loss of our "Old Campaigner" Colonel Innis P. Swift. On October 19th he was relieved from command of the 8th Cavalry and given command of our brigade.

Colonel Swift always felt that the 8th was his home, his father, Colonel Eben Swift having commanded the regiment from 1912 to 1914. One of Colonel Swift's hobbies in the field was to be up visiting the picket lines in the morning when everyone was enjoying that "last hour's sleep." He made the rounds of all of the picket lines, then the kitchen line until he found a cup of hot coffee. Th next seen of him would be on his favorite mount, *Reno Hawk,* putting distance behind him for our next camp.

Colonel Jos. P. Aleshire is now officially commanding the 8th Cavalry. Colonel Aleshire has been regimental commander pro tem for more than three years. During the reign of Colonel Frank Keller, who was also briagde commander, as Colonel Swift has been for some time, Colonel Aleshire commanded the regiment during the Marfa Campaign of '36, and at numerous times since. He has been with us since September '35 and was recently given his eagles. It is hoped that the powers that be, in Washington, will let him remain with us indefinitely.

On November 6th, officers of the regiment were host to officers of the 5th Cavalry. At the same time, each troop was host to the corresponding troop of the 5th Cavalry for dinner. The 5th arrived in the post just in time for dinner, and this was thought a fine way of making the acquaintance of our new neighbors of the 1st Brigade.

Now that the entire division is at Fort Bliss, we are looking forward to a busy, but pleasant winter training season.

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11th Cavalry—Presidio of Monterey, Calif.

COLONEL HOMER M. GRONINGER, *Commanding*

Keeping pace with the Army's program of intensified training for all arms, the 11th Cavalry has stepped up all phases of troop, squadron and regimental training for the period which will end 31 January.

Line troops, now undergoing a refresher course in individual training, are to be concenttated on squad and patrol and combat problems in the field. This phase will culminate in competitive exhibitions late in November. Concurrently officers and patrol leaders are making tactical rides under the regimental commander's direction, on the subjects of marches, attack, delay, and defense, in that order. First ride was held October 30th. This program is augmented by officers' schools on the same subject. Initial phase of this training was completed October 4th when the regiment formed with full field equipment for a march to Camp Ord and return. Each phase is divided into three sections, school, command post exercise, and finally, execution on the ground with all troops.

Completion of the firing season early in October, with 250 men firing in six troops, showed gratifying results. Qualification was an even 98 per cent with the rifle, 62 men making expert and 62 sharpshooter. Qualification in other arms scored almost as high. Regimental trophy for the rifle was awarded Troop B with 48 per cent experts out of 39 firers. Troops A, B, and F had no disqualifiers.

The regiment completed antiaircraft firing, towed targets, October 16th at Camp Ord. Results showed the superiority of rifle fire, due to dispersion, over automatic weapons. Riflemen fired 583 rounds, obtaining 45 hits for an average of 7.7 per cent. Light machine guns obtained 22 hits for an average of 4.3 per cent while the water-cooled guns averaged 3 per cent hits.

Successful experiments with an improvised anti-tank gasoline bomb were conducted recently by Troop F on the Camp Ord reservation. Target was a discarded tank (immobile); at which bottles filled with gasoline were hurled at short range. The fuel was ignited by Very pistol flare and by rifle tracer bullet. A plan to develop a gasoline bomb which will ignite upon contact, utilizing phosphorus or similar chemical, is being studied.

"Graduation exercises" for 50 of the 100 remounts recently received by the regiment were held on Soldier Field October 21st. The animals, presented in troop groups, were shown in the equitation ring, over small obstacles, and on a straight-away dash. The exercise also included firing of blanks at the three gaits.

First of the fall regimental inspections brought out, first, all regimental packs, and the second, forward and rear echelons disposed in functional groups. Officers of the regiment availed themselves of the opportunity to study both set-ups "on the ground."

Five officers were ordered to new assignments during October. They were Lieutenant Colonel Lester A. Sprinkle, commanding 1st Squadron; Major M. L. Stockton, S-2 and S-3; Major Phillip B. Shotwell, Unassigned (Troop A); Captain Egon R. Tausch, Troop B, and First Lieutenant Wilfred H. Tetley, assistant adjutant. Lieutenant Colonel Sprinkle was assigned to duty with the 6th Division staff at Camp Jackson, S. C.; Major Stockton, Staff, Fort Riley, Kansas; Major Shotwell, Logan, Utah (ROTC); Captain Tausch, assistant military attache, Mexico City, and Lieutenant Tetley, Signal detail in Honolulu. New names on the roster are those of First Lieutenants Albert E. Harris and Charles M. Iseley, Second Lieutenants John W. Dobson and Stephen W. Downey. Lieutenant Harris, assigned from West Point, New York, commands Troop A, and Lieutenant Iseley, from the Cavalry School, commands Troop B. Lieutenant Downey is an honor graduate appointment from Stanford University, assigned to Troop F. Lieutenant Dobson, a 1939 graduate of U.S.M.A., is assigned to Troop A.

Regimental participation in Monterey Peninsula horse activity has resulted in reëstablishment of peninsula polo. Under direction of Major C. H. Gerhardt, a Presidio team is participating in weekly polo contests at Del Monte Field, where Sunday programs are held under joint Army and civilian sponsorship. Cavalrymen seeing action in the first game October 29th were Major Gerhardt, Captain Alexander George and Lieutenant Downey.

Four cavalrymen, Lieutenant Iseley, Sergeant Thomas Sapash, Sergeant Victor Shantz, and Corporal Robert Seney, representing the Presidio Horse Show team, journeyed to Santa Barbara October 7th and 8th for the Riding and Hunt Club Horse Show and claimed top honors for the two-day event. Six horses were taken on the trip, of which two were inexperienced. Jump courses were excellent and proved very sporting, with the cross-country course, over hilly terrain, having more than the usual number of jumps encountered in the hunting field.

In the current six-man football season on the post, two Cavalry teams, Troop A and Machine Gun Troop, both placed in the semi-finals, where Troop A's Yellow Jackets nosed out the Machine Gun Blue, 13-12, in a fast, hard-driving contest November 1st. The troopers will meet a team from Headquarters Battery of the 2d Battalion, 16th Field Artillery, for the post title.

A regimental recruit detachment has been formed and is carrying on intensive training in all basic military fields. Recently all men of the detachment were asked to write short essays on "Why I Joined the 11th Cavalry." The winning essay, by Private Sidney R. Stark of Troop F, follows:

"I transferred to the 11th Cavalry from the Medical Corps because one does more in the Cavalry. Before I enlisted in the Army, I endeavored to join the 11th Cavalry but was informed that no vacancies existed.

"In the 11th there is a spirit that is inspired by the motto: 'Allons' — Onward, onward until the task, no matter how large or small, is accomplished.

"My favorite hobbies are riding and shooting, and in the Cavalry only can one find both. We fire the rifle, pistol, and machine gun.

"With my desire for riding and shooting satisfied, and a great motto to uphold, I am more than grateful that I have had the opportunity to join the 11th Cavalry."

* * *

12th Cavalry—Fort Bliss, Texas

COLONEL JOHN A. ROBENSON, *Commanding*

Since September 15th, the 12th Cavalry has been "in the field," and present indications show the regiment will continue to operate under field conditions for at least the next four months. On September 15th the troops departed Forts Brown and Ringgold for Fort Clark to engage in two weeks training in prepartion for the 1st Cavalry Division Maneuvers in the vicinity of Balmorhea. The two weeks at Clark were climaxed with a polo tournament and a three-day brigade horse show in which the 12th received its full share of ribbons.

The one regrettable incident of the brigade exercises was the injury sustained by Colonel Arthur E. Wilbourn, then commanding the regiment. Colonel John A. Robenson, 5th Cavalry, has assumed command.

On October 1st, the 5th and 12th left Fort Clark for Toyahvale and the maneuvers. The 300 mile march was completed with men and animals in fine condition and with every member of the regiment more cognizant of the value and meaning of march discipline.

The two weeks of maneuver of Toyahvale, culminating in a division review for General Kenyon A. Joyce, U.S.A.

At Toyahvale,the order that the 1st Brigade would continue to Fort Bliss instead of returning to home stations was received. On November 8th the 12th arrived at Fort Bliss and commenced preparation for the four months' intensive training as part of the First Cavalry Division.

Among the social events of the period, a farewell dinner given by the ladies of Fort Brown, the receptions at Fort Clark tendered by General and Mrs. Wainwright and by Colonel and Mrs. Stearns, the promotion party given in Pecos by Colonel Whitney, Chaplain (Captain) Sides and Lieutenant LeMoyne and the luncheon given by officers of the 2d Brigade upon our arrival at Fort Bliss.

* * *

13th Cavalry—Fort Knox, Ky.

COLONEL JACK W. HEARD, *Commanding*

Colonel Charles L. Scott who had commanded the regiment since September, 1936 departed from the Post on

September 23rd for his new station at Boston. The entire regiment escorted Colonel Scott as far as Tip Top. Colonel Jack W. Heard assumed command of the regiment on September 24th.

At a Brigade Review held on October 9th, the Soldiers Medal was presented to Corporal George W. Mollett, Troop "F," 13th Cavalry. At the same review a medal was presented to Sergeant Ivan L. Ryerson, Troop "A," 13th Cavalry by a delegation of the Kentucky War Mothers, who were guests of Fort Knox on that day, for his outstanding work as a student at the Brigade Motor School.

Six of the eight troops have moved into the new permanent barracks. Troop A and the Machine Gun Troop expect to be comfortably settled in the near future.

The regiment participated in the demonstrations and exercises for the Congressional Committee which visited Fort Knox, on November 9th and for the Faculty and Students from Fort Riley during the week of October 15th.

A detachment of the regiment under command of Lieutenant Colonel B. Q. Jones participated in the Armistice Day Parade in Louisville.

The regiment has been very actively engaged in the recruiting campaign, having sent detachments of vehicles and men to many points in the Corps Area. A number of recruits for the regiment have been obtained and are fast taking their places in the different organizations.

The regiment has a successful team in the newly organized six men football league and is preparing to defend its championship in the Post Bowling League.

Cavalry Leadership Tests for Small Units were held on October 30th with selected platoons from the Combat Car Troops competing. While official notification has not been received, a platoon of Troop "E," 13th Cavalry, commanded by First Lieutenant Karl T. Gould, was the winning platoon in the regiment.

In addition to Colonel Heard, Lieutenant Colonel Byron Q. Jones, Lieutenant Colonel Cornelius M. Daly, Captain Daniel P. Buckland, First Lieutenant Karl T. Gould, First Lieutenant Bogardus S. Cairns and Second Lieutenant Edwin A. Russell have joined the regiment. Lieutenant Colonel Ralph I. Sasse, Major Mordaunt V. Turner, First Lieutenant William B. Fraser, First Lieutenant Jack W. Turner and First Lieutenant Gerard C. Cowan have been relieved from assignment and ordered to new stations.

26th Cavalry (PS)—Fort Stotsenburg, P. I.

COLONEL ROBERT BLAINE, *Commanding*

All machine gun units of the regiment are engaged in firing at marine targets on Subic Bay. We appreciate the coöperation and assistance we are receiving in this training from the captain of the yard and other naval personnel at Olongapo.

Field training and preparation for a regimental march and maneuvers in November is under way.

The 118 remounts received in July have just been turned to duty. To First Lieutenant H. H. Howze and his assistants, Lieutenants W. E. Chandler and R. E. Arnette is due a lot of credit for work well done in the training of these remounts. Four of the remounts have been assigned to the Department Stables in Manila and eleven will be sent to the Philippine Division at Fort McKinley.

The September horse show was held in the new jumping area. All troops have shown a marked increase in their interest in equestrian activities.

Troop B, for the second successive year won the regimental volleyball championship. Under the able coaching of Lieutenant J. D. Alger, the regimental basketball team is prepared to give more than a good account of itself this year.

Captain Juan S. Moran, 26th Cavalry (PS), (major, Philippine Army) has been placed on detached service with the Philippine Army as commanding officer of the 2d Military District with headquarters at Tarlac.

Lieutenant Colonel J. T. Pierce and W. T. Haldeman and Captain H. L. Kinnison and Bradley will return to the United States on the October transport.

Majors C. R. McLennan and L. W. Biggs and First Lieutenant H. J. Fleeger have been assigned to the regiment. They will arrive on the *Grant* October 26th.

103d Cavalry—Tyrone, Pennsylvania

COLONEL BENJAMIN C. JONES, *Commanding*

Troops of the regiment are in the midst of preparations for the seven days additional field training directed by the War Department for the National Guard. The regimental commander has ordered concentration of the entire regiment at Clearfield, in the mountains of Central Pennsylvania, for the week November 12th to 18th. Orders for the movement and training programs and schedules for the period have been issued and a rather strenuous week of activity is anticipated.

Mounted units will march overland to Clearfield from their home stations. For the more distant troops at Sunbury and Lewisburg and New Castle this plan involves a march of close to a hundred miles and these troops will take two or three days for the movement. Troop B at Lock Haven will have a sixty-five mile march to Clearfield, but the troops at Tyrone and Altoona and Punxsutawney can make the journey in a relatively easy one day march. The whole movement will be the finest kind of test both of the state of training of the troops and of the condition of men and horses.

By reason of the removal of his residence from Altoona to Pittsburgh Second Lieutenant John S. Hollar in September requested his transfer to the inactive list. To fill the vacancy thus created Master Sergeant Samuel T. A. Crawford of Headquarters Troop has been appointed second lieutenant and assigned to command the scout car platoon.

Within the past month two new appointments of sec-

ond lieutenant, N.G.U.S., have been made in the regiment. One is of Master Sergeant Kenneth F. Stover of Headquarters Troop, who is at present a student at the N.C.O. Class at Fort Riley. The other is of Corporal James E. Clover of Troop A.

Fall school activities are in full swing. In each echelon in the regiment school sessions are held periodically, the various commanders acting as instructors. Two regimental school sessions have thus far been held in Tyrone under direction of the regimental commander, and one is planned for each month through the balance of the armory training year. At the October session the conference, attended by all field and staff officers, was on the employment of field artillery with cavalry.

106th Cavalry—(Illinois Component)

MAJOR RALPH G. GHER, *Commanding*

The interest of the personnel of the 106th Cavalry is now centered on the proposed organization of the 23rd Reconnaissance Car Squadron. This organization will only affect Troop F and Machine Gun Troop at Springfield. Although details have not been announced, it is contemplated that Troop F will be transferred to Chicago and Machine Gun Troop to Urbana, thus giving each of these cities an additional horse cavalry unit. The present Troop F and Machine Gun Troop of Springfield will be converted to two mechanized troops comprising the 23rd Reconnaissance Car Squadron. The senior officer of the Springfield troops is Captain Mark Plaisted, now commanding the Machine Gun Troop, who is tentatively slated to command the new mechanized squadron. First Lieutenant Charles R. Bean of the Machine Gun Troop will probably succeed Captain Plaisted as a troop commander in the new organization. First Lieutenant William Kirby of Troop E will probably command Troop F upon its transfer to Chicago, and First Lieutenant John Homfeld of Headquarters Troop is expected to assume command of the Machine Gun Troop when it is moved to Urbana.

The proposed change will leave Springfield with no units of the 106th Cavalry, and for the first time since 1896 the city will have no mounted troops.

Major Ralph G. Gher and Captain W. A. Crookston, Adjutant, visited Fort Riley, Kansas, October 5th, 6th and 7th. They travelled in a plane furnished by the 108th Observation Squadron and piloted by Lieutenant Eugene Fogle of that squadron. The purpose of the trip was to observe the annual cavalry demonstration, but due to the transfer of various units and other activities caused by the European crisis, it was necessary to abandon the plans for the demonstration this year. The observation of other activities at the Cavalry School however, proved valuable, among them the eliminations for places on the Olympic Games Jumping Team.

The seven-days winter training program has resulted in considerable activity in the troops of the regiment. Troop E spent the week of November 18th to November 25th at Fort Sheridan, Illinois, marching from Chicago. Headquarters Troop trained at Urbana during the same week, as did the Medical Detachment. Troop F and Machine Gun Troop spent the week ends of November 10-11, 18-19, 25-26 and December 2-3 in the field. The regimental staff divided its time between the various units at Springfield, Fort Sheridan and Urbana, and in terrain exercises, tactical marches and a command post exercise.

Major Gher, commanding the regiment in the absence of Lieutenant Colonel Kenneth Buchanan, who is on duty with the General Staff in Washington, attended the National Guard Convention in Baltimore in November.

Headquarters Troop and Medical Detachment now occupy their new armory in Urbana.

Progress is rapidly being made in the construction of the new armory of Troop E in Chicago.

Under the supervision of Major E. A. Franklin, Instructor, the Springfield officers have been participating in a map problem which will continue through the winter months. Captain Plaisted commands the Blue forces, and Captain Crookston the Reds.

A former member of this regiment recently took office as Adjutant General of Illinois. General L. V. Regan started his military career as a private in the 1st Illinois Cavalry in 1913, and served with the cavalry on the Mexican Border, and with the Field Artillery in France. Prior to his appointment as Adjutant General he served on the staff of the 33rd Division.

112th Cavalry—Dallas, Texas

COLONEL CLARENCE E. PARKER, *Commanding*

OFFICERS ROSTER OF 112TH CAVALRY

Command and Staff: Colonel C. E. Parker, C.O.; Lieutenant Colonel A. S. Johnson, Executive Office; Captain G. A. Brewer, S-2-3; Captain B. L. Smith, Chaplain; Captain W. A. Johnson, S-1; Captain H. L. Phillips, S-4; First Lieutenant R. H. Johnson, Assistant S-1.

Headquarters Troop: Captain W. M. Hill, C.O.; First Lieutenants G. S. Metcalf, and T. H. Houghton, Second Lieutenant E. K. Morse.

1st Squadron: Major J. B. Dunlap, C.O.; First Lieutenant M. L. Bass, S-1-2-3.

Troop A: Captain C. W. Newman, C.O.; Second Lieutenants J. H. Neel and P. D. Hale.

Troop B: Captain W. T. Starr, C.O.; First Lieutenant D. M. McMains, Second Lieutenant W. H. Laird.

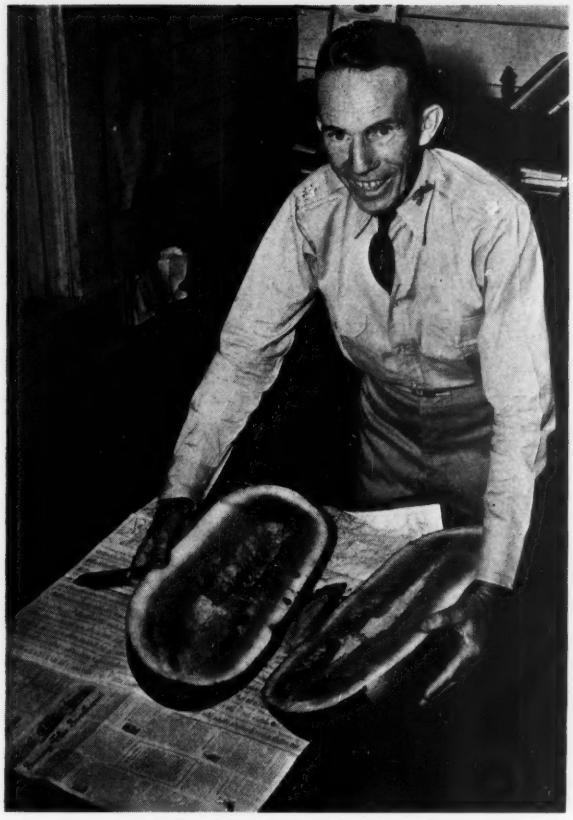
3d Squadron: Major M. McIntire, C.O.; First Lieutenant R. R. Houghton, S-1-2-3.

Troop I: Captain R. W. Davis, C.O.; First Lieutenant S. L. Hunnicutt, Second Lieutenant R. Lilley.

Troop K: First Lieutenant C. E. Grant, C.O.; Second Lieutenant J. L. Minter.

Machine Gun Troop: Captain L. A. Beecherl, C.O.; First Lieutenants R. F. Fenley and F. M. Cowman, Second Lieutenant L. Leonard.

2d Squdron: Major W. P. Cameron, C.O.; Second Lieutenant A. B. Wallace, S-1-2-3.



Lieutenant Colonel John M. Thompson, unit instructor, 12th Cavalry—Demonstrating cavalry exploitation; a successful break-through accomplished, envelopment contemplated.

Troop E: Captain J. A. Mann, C.O.; First Lieutenant W. R. Shaw, Second Lieutenant P. L. Hooper.

Troop F: Captain R. G. Phillips, C.O.; First Lieutenant M. E. Hood, Second Lieutenant T. R. Tipton.

Medical Detachment: Major W. B. Lasater, C.O.; Captains C. E. Williams and F. C. Steinman.

NOTE: Every officer named above is an *active, boasting,* member of the Cavalry Association and reads each issue of the CAVALRY JOURNAL from cover to cover to his professional advantage.

Although the Pyron Trophy Test, being conducted in the regiment during the present armory training period, has practically just started, Colonel Parker is very much pleased with the results this competition has already produced in the marked increase of attendance at drills and schools and the improved appearance of the enlisted personnel as a whole, at military formations.

All troops are working hard to win this competition and displaying keen interest. For example, to show how keen some of the troops are about winning the trophy, all the men of Troop A, commanded by Captain C. W. Newman, have had their spurs nickle plated, at their own expense.

Commencing with October 15th, as prescribed by Corps Area, all units of the regiment started drilling twice a week instead of once. These extra drills together with the prescribed seven days' field training, per quarter, will accomplish great results from a training standpoint.

Despite the added drills, the fine spirit that has always existed in this regiment, reference to extra time voluntarily devoted to drill, still holds. The minimum time devoted to a drill is three hours and on Sundays most of the troops drill four and five hours. In fact, it is not an uncommon occurrence for Troop F, commanded by Captain Royal G. Phillips, to start drill Sunday morning at 7:00 AM, drill all day Sunday, except a few hours in the afternoon, when the men are given passes, have a night maneuver that night, and the men get off in time for work Monday morning.

When one considers the fact that the men receive pay for only one and one-half hours drill and the extra time devoted is purely voluntary, it shows a splendid *esprit.*

In order to carry on the mounted instruction at the night drills, Troop A has installed large floodlights. Other troops in the regiment are doing the same. The officers and men of the troops are paying for these lights out of their own pockets, as the quartermaster has no funds available for this purpose. This also shows fine *esprit,* when officers and men are willing to dig down into their own pockets and pay for training facilities.

On Saturday and Sunday, September 9 and 10, 1939, the Machine Gun Troop, Captain Louis A. Beecherl, commanding, held a most successful night march and problem. Horses were borrowed from Troop B, so the entire troop could be mounted. The troop left the armory at 8:30 PM marched about 18 miles to a previously selected camp site, solving a problem en route, spent that night and Sunday in field training, returning to the armory Sunday afternoon.

As the night was extremely hot, Captain Beecherl with his usual foresight for the comfort of his men, had procured ice-cold watermelon for the entire troop which was served at 3:00 AM, after the horses had been groomed, watered, and fed and camp prepared. This was greatly enjoyed by all as the picture shows.

At a recent meeting of the combined officers and noncommissioned officers school, at which over ninety officers and men were present, our beloved chaplain, Captain Bertram L. Smith, presented a beautiful trophy to Captain Bub Newman, commanding Troop A, as that troop was the winner of the brigade mounted pistol competition held at camp last July. The team was composed of Sergeant John Reynolds and Corporal B. M. Ford. This is the second consecutive time that Troop A has won this event and the second time that Sergeant Reynolds has been on the winning team.

The Annual Federal Inventory of property in the regiment was completed on October 30th. Captain L. M. Fellbaum, the State Inspector, was high in his praise of the excellent condition in which he found the property and stated that it was a pleasure to check the property in the 112th Cavalry, as the majority of troops always had

Machine Gun Troop, 112th Cavalry, participating in envelopment at 3:00 a.m. September 10th

their property neatly and correctly arranged to facilitate rapid checking and counting.

Out of the many fine bands in the State of Texas, the Regimental Band, was chosen as the official band for the Texas State Fair held in Dallas from October 8th to 22d, and played at functions and concerts every day of the celebration. The regiment has a right to be proud of its splendid band and the regimental commander has received many letters from outside sources commending the band on its excellent work during the fair.

Word has been received that the regiment will be issued 104 remounts in the near future. These remounts will be a Godsend as some of our old faithfuls are getting along in years and need replacing.

Lieutenant P. L. Hooper, Troop E, the shooting member of the 112th Cavalry, recently returned from Camp Perry with a flock of medals and trophies. Lieutenant Hooper is so modest that it is difficult to obtain from him exactly what he accomplished at Perry, but from reports he won about everything that one could be expected to win with both rifle and pistol. "Congratulations Lieutenant Hooper."

The regimental instructor recently completed an inspection of the two new troops, "I" at Texarkanna and "K" at Abilene, and reports that these troops are coming along in fine shape and making rapid progress.

124th Cavalry—Houston, Texas

COLONEL CALVIN B. GARWOOD, *Commanding*

This regiment has received notice that we will have additional drills and also seven days of field training prior to January 31, 1940.

The Colonel was very anxious to get his entire regiment assembled for these additional days but being impractical to do so, each unit will train separately at their armory. The dates for additional training of this Regiment are as follows: December 2nd and 3rd, December 16th and 17th and January 12th, 13th and 14th. A complete schedule for training for the seven additional days has been worked out by the S-3 and the Executive Officer, Lt. Col. Harry H. Johnson and has been approved by Colonel Garwood. During the field training period a Staff Officer will visit each organization. This regiment is eager and looking forward to the results to be accomplished with the additional training.

The 124th Cavalry Officers are going to dress up! At camp last summer, Colonel Garwood appointed a committee composed of Lieutenant J. William Wiseheart, Lieutenant John E. Golding and Lieutenant Raymond W. Darrah to make recommendations as to the purchase of uniforms by the officers of the Regiment. These recommendations were made and approved by Colonel Garwood and measurements are now being taken so that at camp next summer all officers of the 124th Cavalry will be "dyked out" in great style.

Showing an indication that correspondence schools are very much in favor in this regiment, is that Colonel Willoughby, our Instructor, is putting in many hours grading papers of the men in the regiment. We have two new Inactive Officers in the Regiment Headquarters Troop; Sergeant R. O. Wyatt and Sergeant J. F. Spencer.

Congratulations to these men and hope we will have more before the school year is over.

Troops A and B in Fort Worth, Texas, staged a horse show on Sunday, November 5th. This horse show is an annual event handled completely by the non-commissioned officers and ribbons are awarded to the winners. Civilians are encouraged to enter. After the horse show, a party was given for Major Perry E. Taylor, the new Instructor at Fort Worth. Major Taylor, who relieved Major Harry Knight, is an old timer in this Regiment, having been an instructor of the 112th Cavalry, of which we were a part in 1927. He understands the problems of the National Guard and it is indeed our good fortune to have him reassigned as an Instructor in this Regiment.

The operations Officer of the 124th Cavalry, Captain J. W. Neville, returned last week from the Command and General Staff School at Camp Bullis, Texas. He reports that he gained valuable information and thoroughly enjoyed this important assignment.

Late in October Captain A. F. Marcais, an old timer in this regiment, and Commanding Officer of the Machine Gun Troop at San Antonio, resigned due to the press of private business. Captain Marcais has many friends in the Regiment to wish him success. Lieutenant John E. Golding has been promoted to Captain and Troop Commander of the Machine Gun Troop and the Colonel is looking to him to maintain the usual high standard of the Machine Gun Troop.

The Headquarters Troop of this Regiment marched in the Armistice Day parade with the other units of the National Guard of Houston, Texas, in spite of rain, on November 11th.

62d Cavalry Division
305th Cavalry—Philadelphia, Pa.

COLONEL VINCENT A. CARROLL, *Commanding*

The 305th finished the active duty training with a flourish. The members of the regiment scored the most points in the horse show at camp which included the personnel of the 61st and 62nd Cavalry Divisions. In the military team class, Captain John Allen, First Lieutenant Frank Howley, and Second Lieutenant Scarlett, represented the 305th and captured 1st place with ease.

The annual meeting for election of officers was held on September 27th with the following results:

Colonel Carroll, President
Captain Ed Young, First Vice President
Lieutenant James Gentle, Second Vice President
Captain Thomas Meehan, Third Vice President
Captain Wm. Patterson, Secretary
Lieutenant Shaler Stidham, Treasurer
Lieutenant Paul Weimar, Historian
Captain John Watson, Major M. S. Easby } Executive Committee

The large turnout at the meeting showed continued enthusiasm and promised a successful year.

Captain Doug Morrow and Lieutenant Ken Rean put on a night terrain problem on the evening of October 20, which was similar to the mechanized night ride held last spring. The 20 participants enjoyed a lavish turkey dinner at the Old Mill Inn at Hatboro, Pa., and afterward spent an exciting evening scurrying around the countryside in a made race to locate given points on their maps before the other teams. The winners of the event were Lieutenant Renninger and Sergeant McGroarty. Incidentally, Sergeant McGroarty was selected as the best C.M.T.C. (blue) in the 3rd Corps area last summer and we understand that he is to receive his commission shortly.

Colonel A. H. Wilson has left us to take command of the 14th Cavalry at Fort Des Moines, Iowa. It was with regret that we bid Colonel Wilson goodbye at a farewell dinner on September 29th.

Pending the appointment of a new unit instructor, Colonel Joe King has been pinch hitting. For the past several years Colonel King's assignment has been with the Infantry, but since his recent association with the cavalry his family report that his disposition has improved immensely.

On Sunday November 12, the annual regimental church service was held at St. Davids chapel at Ithan, Pa. Chaplain Richard N. Gurley delivered a timely and impressive sermon.

Following the service the officers and their guests repaired to the Merion Cricket Club for an informal social function.

306th Cavalry—Baltimore, Maryland

COLONEL MATTHEW F. JAMES, *Commanding*

The scheduled troop school program of both the Washington and Baltimore units began in October with reports from various officers of the several types of active-status training engaged in during the past summer. These included C.M.T.C. and tactical training at Fort Belvoir, Va., Army Maneuvers at Manassas, Va., and Seventh Cavalry Brigade training at Fort Knox, Ky.

The absence of the Regimental Commander, who will be away from the Regiment for three months due to a business trip through the South, was deeply regretted by all who attended the first meeting in Baltimore.

Practical horsemanship at Fort Myer began in November with facilities generously made available by the Third Cavalry. Lieutenant Colonel Edward B. Harry, 153rd Cavalry Brigade, will again be Master of the Horse on all cross-country rides, with Major Edward A. Kane, 306th Cavalry in command at mounted drill formations. The cross-country course south of Fort Myer has been made more sporting and now includes a fair assortment of jumps, slides and wood trails.

In a recent Pistol Match in which thirteen teams of Reserve Officers of the Washington District competed, the two Cavalry teams, captained and coached by Lieutenant Robert Castle, finished in fourth and sixth places. Watch us improve! Members of these teams are: Major Henry Ames; Captains Buell, Gleason, Gunderson,

BOOKS FOR THE HORSEMEN

Hand Book for Horse Owners, by *McTaggart*	$ 2.75
Horse Training, Outdoor and High School, *Beudant* (translated by Lt. Col. J. A. Barry, U. S. Cavalry)	3.00
Horseshoeing, *Churchill,* 1933	1.20
Horsemanship, by *Brooke*	7.00
More About Riding Forward, by *Littauer*	3.00
My Horse Warrior	2.00
Polo Ponies, Their Training and Schooling, *Lieut. Paul G. Kendall*	7.50
Position and Team Play, *Devereaux*	1.50
Practical Light Horse Breeding, by *Wall*	3.50
Riding Forward, *Capt. V. S. Littauer*	2.00
School for Riding, *Captain Sergei Kournakoff*	2.50
Selection and Training of the Polo Pony, *Cullum*	5.00
The Art of Riding, *Lt. Col. M. F. McTaggart*	3.50
Training Hunters, Jumpers and Hacks, by *Colonel H. D. Chamberlin* (Original printing—limited edition)	10.00
Training Hunters, Jumpers and Hacks, by *Colonel H. D. Chamberlin* (British printing—one month for delivery)	4.50
Riding and Schooling Horses, by *Colonel H. D. Chamberlin* (British printing)	4.50

(Books on horsemanship by The Cavalry School are listed with the Departmental Texts on inside of back cover.)

BOOKS OF RECENT OUTSTANDING VALUE

A Horseman's Handbook on Practical Breeding, by *Colonel John F. Wall,* U.S.A., Retired	$ 4.00
Thoroughbred Bloodlines, by *Colonel John F. Wall*	25.00

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Parker and Woodruff; First Lieutenants Castle, Hogan, Luckenbach, Morehouse, and Wilcox; and Second Lieutenant Knoll.

Recent changes in the regiment by Special Orders, Headquarters Third Military Area are:

Promotions: First Lieutenant Ford E. Young, Jr., from Second Lieutenant.

Assigned: Captain Frederick M. Sperry; First Lieutenants James A. Braddock, Edgar C. Roberts, and Clarence S. Wilcox; Second Lieutenants Edward T. Clark, Jr., William T. Gordon, Joseph V. Riggs, and Roland C. Wockenfuss.

Relieved: First Lieutenant Baxter C. Crane; Second Lieutenants Richard A. Jamison and Harry G. Randall.

310th Cavalry

LIEUTENANT COLONEL HUGH D. BLANCHARD, *Commanding*

The active 1939 summer training for the officers of the 310th Cavalry began with some of the officers being selected to assist in the training of the C.M.T.C. at Fort Oglethorpe, Georgia, during a part of June-July.

Unit training for the Regiment was August 6 to 19, inclusive, at Fort Oglethorpe, Georgia. For this training period thirty-one officers were ordered to duty with Major Earle L. Hunter acting as Regimental Commander. The training this year was very interesting and instructive by reason of the fact that the 310th Cavalry, Headquarters Troop 63d Cavalry Division, 463d Reconnaissance Squadron and 403d Engineer Squadron were ordered to duty for the same training dates. These units were quartered in the same area and officers of different units in some instances occupied the same tents. All units used the same messing facilities and were seated irrespective of units, which offered an opportunity for officers to make new friends and acquaintances.

The only regular army instructor present was Major H. B. Gibson, unit instructor for 310th Cavalry, who coördinated the training activities of all units. The training was so coördinated that when the different units had related subjects they combined their units for that particular subject. This was very helpful because it afforded an instructor who was trained in that particular subject. For instance, in map reading and aerial photography exercise an Engineer officer acted as instructor; for equitation the 310th Cavalry furnished a Fort Riley graduate, and the Armored Car Squadron furnished an instructor when the units had an exercise relating to this subject. This spirit of coöperation was carried out for the duration of the camp. Reserve officers acted as instructors in every instance except the period for gas instruction. For the gas instruction the 6th Cavalry furnished the instructor.

The unit training for the 310th Cavalry covered such subjects as Mess Management, Equitation, Security and Information, Care of Animals and Stable Management, Cavalry Drill, Map and Aerial Photography, Rifle and Pistol Marksmanship and Combat Principles.

Roster of Regular Army Cavalry Officers

(As of November 1, 1939)

Office, Chief of Cavalry, Washington, D. C.

Major General
John K. Herr

Colonel
Charles Burnett

Lieutenant Colonels
Karl S. Bradford
Willis D. Crittenberger
Robert W. Grow
Henry J. M. Smith
Frank L. Whittaker

Majors
Gilbert X. Cheves
Charles S. Kilburn

The Cavalry Board, Fort Riley, Kansas

Colonel
Dorsey R. Rodney

Lieutenant Colonel
John T. Pierce

Majors
Richard E. Tallant
Andrew E. Forsyth

Captain
Henry C. Hine, Jr.

Commandant, Staff and Faculty, The Cavalry School, Fort Riley, Kansas

Brigadier General
Robert C. Richardson, Jr.

Lieutenant Colonels
John J. Bohn
Harold C. Fellows
Frederick Gilbreath

Majors
William B. Bradford
John T. Cole
Eugene A. Regnier
Marcellus L. Stockton, Jr.

Captains
Paul G. Kendall
Henri A. Luebbermann
Hayden A. Sears
Jesse B. Wells
John P. Willey

Staff and Faculty, The Infantry School, Fort Benning, Georgia

Major
Thomas W. Herren

Staff and Faculty, The Field Artillery School, Fort Sill, Oklahoma

Captain
Samuel P. Walker, Jr.

Staff and Faculty, The Air Corps Tactical School, Maxwell Field, Alabama

Lieutenant Colonel
John C. Mullenix

Staff and Faculty, The Engineer School Fort Belvoir, Virginia

Major
Alexander B. MacNabb

Staff and Faculty, The Coast Artillery School, Fort Monroe, Virginia

Major
Carl J. Dockler

Staff and Faculty, Command and General Staff School, Fort Leavenworth, Kansas

Colonel
Kinzie B. Edmunds

Lieutenant Colonels
William C. Chase
John A. Considine
Paul R. Davison
Harold C. Mandell
Raymond E. McQuillin
Arthur P. Thayer
John B. Thompson

Majors
Harold deB. Bruck
Erle F. Cress
Roscoe S. Parker
Rufus S. Ramey
Albert C. Smith
Lucian K. Truscott, Jr.

Captain
Henry M. Zeller

Staff and Faculty, The Army War College, Washington, D. C.

Colonel
George B. Hunter

Lieutenant Colonel
James W. Barnett

Major
Earnest A. Williams

Historical Section, The Army War College, Washington, D. C.

Lieutenant Colonels
James K. Cockrell
Carl H. Strong

War Department General Staff, Washington, D. C.

Lieutenant Colonels
Roderick R. Allen
William M. Grimes
Geoffrey Keys
Harold M. Rayner
William E. Shipp
Robert W. Strong

Majors
Walton W. Cox
William K. Harrison, Jr.
Paul McD. Robinett
Herbert L. Earnest

Captains
George A. Rehm
Ira P. Swift
James H. Walker

General Staff with Troops

Colonels
Arthur W. Holderness, Manila, P. I.
Donald A. Robinson, Fort Bliss, Texas
Llewellyn W. Oliver, Atlanta, Georgia
Charles L. Scott, Boston, Massachusetts

Lieutenant Colonels
Wilson T. Bals, Omaha, Nebraska
David H. Blakelock, Atlanta, Georgia
John C. Daly, Fort Hayes, Ohio
John F. Davis, Governors Island, New York
Calvin De Witt, Jr., Fort Bliss, Texas
Henry L. Flynn, Baltimore, Maryland
Edward C. McGuire, San Francisco, California
Lester A. Sprinkle, Pres. of Monterey, California

Majors
Vance W. Batchelor, Fort Bliss, Texas
Leslie D. Carter, Panama Canal Department
Ray T. Maddocks, Fort Bliss, Texas
James C. Short, Fort Clark, Texas

Duty with General Staff

Lieutenant Colonels
Beverly H. Coiner, Fort Sam Houston, Texas
Richard W. Cooksey, Headquarters, Hawaiian Department
Norman E. Fiske, Washington, D. C.
Otto B. Trigg, Governors Island, New York

Majors
William T. Hamilton, Fort Sam Houston, Texas
Charles S. Miller, Omaha, Nebraska
Herbert A. Myers, Atlanta, Georgia

Military Attaches

Majors
Samuel A. Greenwell, London, England
George E. Huthsteiner, Riga, Latvia

Captain
Egon R. Tausch, Mexico City, Mexico

Aides

Majors
Mark A. Devine, Jr., Panama Canal Department
James B. Patterson, Hawaiian Department
Carl J. Rohsenberger, Columbus, Ohio

Captains
Donald H. Galloway, Fort Sheridan, Illinois
William H. Greear, Fort Bliss, Texas
Harrison H. D. Heiberg, Fort Knox, Kentucky
Harry C. Mewshaw, Fort Bliss, Texas
Thomas J. Randolph, Panama Canal Department
Gustavus W. West, Fort Hayes, Ohio

First Lieutenants
Joseph E. Bastion, Jr., Panama Canal Department
Robert G. Fergusson, San Francisco, California
George R. Grunert, Vancouver Barracks, Washington
Joseph F. Haskell, Fort Riley, Kansas
Harold L. Richey, Fort Benj. Harrison, Indiana
Edward W. Williams, Manila, P. I.

Second Lieutenant
Kelton S. Davis, Fort Clark, Texas

Duty With Troops

First Cavalry Division, Fort Bliss, Texas

Major General
Kenyon A. Joyce

Colonels
Joseph P. Aleshire
John K. Brown
Innis P. Swift
William W. West

Lieutenant Colonels
Terry de la M. Allen
Edmund M. Barnum
Rinaldo L. Coe
Pearson Menoher
Clinton A. Pierce
Edwin E. Schwien

Majors
Harry H. Baird
William T. Bauskett, Jr.
Sexton Berg
Louis G. Gibney
Percy S. Haydon
James S. Rodwell
James M. Shelton

Captains

Clarence C. Clendennen
William S. Biddle
John L. De Pew
Robert Edwards
Walter E. Finnegan
Aladin J. Hart
Eugene C. Johnston
Laurence K. Ladue
Halley G. Maddox
Charles G. Meehan
Alexander M. Miller, 3d
Gilman C. Mudgett
Ralph M. Neal
Charles H. Noble
William J. Reardon
Thomas F. Sheehan
Charles H. Valentine

First Lieutenants

Creighton W. Abrams, Jr.
Harry W. Candler
Frederick H. Gaston, Jr.
Robert E. Obrien, Jr.

Second Lieutenants

Joe Ahee
John K. Boles, Jr.
Frederic W. Boye, Jr.
Haskett L. Conner, Jr.
Edward M. Dannemiller
Robert R. Gideon, Jr.
Walter S. Gray
Jack L. Grubb
John B. Maxwell, 2d
Don R. Ostrander
William H. Patterson, Jr.
Ira B. Richards, Jr.
Edward M. Serrem
William W. West, 3d
Arthur H. Wilson, Jr.
Henry B. Wilson
Jasper J. Wilson

First Cavalry Brigade, (Less 12th Cavalry), Fort Clark, Texas

Brigadier General
Jonathan M. Wainwright

Colonels

Cuthbert P. Stearns
John A. Robenson

Lieutenant Colonels

Harry A. Flint
Gordon J. F. Heron
Oliver I. Holman

Majors

Roy E. Blount
Richard W. Carter
Charles G. Hutchinson

Captains

Woodbury M. Burgess
Walter Burnside
Edward J. Doyle
Frederick W. Fenn
Alan L. Fulton
Harry W. Miller
Thomas R. Starratt

First Lieutenant
Leonard C. Shea

Second Lieutenants

John J. Carusone
Richard L. Irby
Clifford L. Miller, 2d
George H. Minor
Charles J. Parsons, Jr.
John F. Polk
John P. Tomhave

Seventh Cavalry Brigade, Fort Knox, Kentucky

Brigadier General
Adna R. Chaffee

Colonels

Henry W. Baird
Jack W. Heard

Lieutenant Colonels

Clarence C. Benson
Cornelius M. Daly
Kenna G. Eastham
Nelson M. Imboden
Byron Q. Jones
William Nalle
Alexander D. Surles
Victor W. B. Wales

Majors

Stephen Boon, Jr.
Claude O. Burch
Leo B. Conner
William T. Fletcher
James V. Gagne
Ernest N. Harmon
Charles R. Johnson, Jr.
George R. McElroy
Redding F. Perry
Charles H. Unger

Captains

William L. Barriger
George P. Berilla, Jr.
John M. Bethel
Wendell Blanchard
Thomas J. Brennan, Jr.
Charles H. Bryan
Daniel P. Buckland
Clyde A. Burcham
Douglas Cameron
George W. Coolidge
Wayne J. Dunn
Harold Engerud
Richard B. Evans
William A. Fuller
Edwin C. Greiner
George B. Hudson
Malcolm D. Jones, Jr.
Rufus L. Land
Clayton J. Mansfield
Kevin O'Shea
Frederick R. Pitts
George W. Read, Jr.
John L. Ryan, Jr.
Claude A. Thorp
Thomas F. Van Natta, 3d
David A. Watt, Jr.
Grant A. Williams
Richard T. Willson

First Lieutenants

Philip H. Bethune
Bogardus S. Cairns
Karl T. Gould
David L. Hollingsworth
Jesse M. Hawkins, Jr.
Charles E. Leydecker
Norman K. Markle, Jr.
Donald M. Schorr
Graves C. Teller

Second Lieutenants

Roberts S. Demitz
Meyer A. Edwards, Jr.
Edwin A. Russell, Jr.

Second Cavalry, Fort Riley, Kansas

Colonel
Harry D. Chamberlin

Lieutenant Colonels

Thoburn K. Brown
Cyrus J. Wilder

Majors

Alfred L. Baylies
Wilkie C. Burt
Edward M. Fickett
James A. Kilian
Harry Knight
Darrow Menoher

Captains

Roland A. Browne
Edwin P. Crandell
Andrew A. Frierson
Leslie M. Grener
Whitside Miller
Joseph R. Ranck
John B. Reybold
John H. Riepe
Theodore S. Riggs
John W. Wofford

First Lieutenants

Joseph A. Cleary
Albert A. Matyas
Richard A. Smith

Second Lieutenants

William F. Beaty
Henry L. Crouch, Jr.
Phillip B. Davidson, Jr.
Robert C. Erlenbusch
Edward F. Gillivan
Lindsay C. Herkness, Jr.
Allen D. Hulse
John J. Kelly
Edgar W. Schroeder
Wilbur C. Strand

Third Cavalry (Less First Squadron), Fort Myer, Virginia

Colonel
George S. Patton, Jr.

Lieutenant Colonel
A. Worrell Roffe

Majors

John A. Hettinger
Edwin M. Sumner

Captains

John H. Collier
Laurence R. Dewey
Thomas Q. Donaldson, Jr.
Paul D. Harkins
Charles B. McClelland, Jr.
James B. Quill

First Lieutenants

Loren F. Cole
Brainard S. Cook
James H. Polk
Jules V. Richardson
David Wagstaff, Jr.

Second Lieutenant
Richard E. Nelson

First Squadron, 3rd Cavalry, Fort Ethan Allen, Vermont

Lieutenant Colonel
Samuel V. Constant

Major
Ernest F. Dukes

Captains

James K. Mitchell
Paul A. Ridge
Theodore C. Wenzlaff

First Lieutenant
Robert E. McCabe

Second Lieutenants

Leslie H. Cross
Ralph L. Foster
Tracy B. Harrington
William A. Sussmann

Fourth Cavalry, Fort Meade, South Dakota

Colonel
Robert C. Rodgers

Lieutenant Colonel
John B. Coulter

Majors

Harold G. Holt
Lewis A. Pulling

Captains

Charles C. W. Allan
Martin A. Fennell
Mitchell A. Giddens
Walter F. Jennings
Louis B. Rapp
Thomas Robinson
Donald W. Sawtelle
Frank T. Turner

First Lieutenants

Edward C. Dunn
Robert J. Quinn, Jr.

Second Lieutenants

Perry E. Conant
James H. Critchfield
Neil D. Van Sickle
Tom E. Matlack
John H. Swenson

Sixth Cavalry, Fort Oglethorpe, Georgia

Colonel
John Millikin

Lieutenant Colonel
John A. Weeks

Majors

Chester E. Davis
Hans E. Kloepfer
Clyde Pickett
Candler A. Wilkinson

Captains

Brendan McK. Greeley
William O'C. Heacock
Hugh F. T. Hoffman
Charles E. Morrison
John O'D. Murtaugh
Gordon B. Rogers
Elmer V. Stansbury
Thomas F. Taylor

First Lieutenants

Anthony F. Kleitz, Jr. — Francis McD. Oliver, Jr.

Second Lieutenants

Benjamin M. Bailey, Jr. — David B. Goodwin
Thomas B. Bartel — Elwin T. Knight
Howard V. Cooperider — Thomas L. McCrary
William G. Dean — Gailon M. McHaney
Lemuel E. Pope.

Ninth Cavalry, Fort Riley, Kansas

Colonel
Stephen W. Winfree

Lieutenant Colonel
James N. Caperton

Majors

Harold E. Eastwood — Isaac G. Walker
John C. MacDonald — Vennard Wilson

Captains

Clarence W. Bennett — Carl W. A. Raguse
Murray B. Crandall — Virgil F. Shaw
Royce A. Drake — Carl D. Silverthorne
Robert L. Howze, Jr. — John H. Stodter
William H. Hunter — Earl F. Thomson
Morris H. Marcus — Isaac D. White
Paul McK. Martin — Willard G. Wyman
James H. Phillips — Wesley W. Yale

First Lieutenants

James O. Curtis, Jr. — Frank S. Henry
Charles G. Dodge — Robert W. Porter, Jr.
Marshall W. Frame — Franklin F. Wing, Jr.
William H. S. Wright

Tenth Cavalry (Less Second Squadron and Troop "F"), Fort Leavenworth, Kansas

Lieutenant Colonel
William H. W. Youngs

Major
William N. Todd, Jr.

Captains

Leander L. Doan — Zachery W. Moores
Robert G. Lowe — Raymond D. Palmer
Charles H. Reed

Tenth Cavalry ("F" Troop), Fort Myer, Virginia

Captains

Basil L. Riggs — Hugh B. Waddell

First Lieutenant
O'Neill K. Kane

Tenth Cavalry (Second Squadron), West Point, N. Y.

Major
Marion Carson

Captains

Edwin H. J. Carns — John L. Hines, Jr.
Peter C. Hains, 3d — Harry W. Johnson

First Lieutenant
Sherburne Whipple, Jr.

Eleventh Cavalry, Presidio of Monterey, California

Colonel
Homer M. Groninger

Lieutenant Colonels

Otis Porter — James E. Slack

Majors

Wayland B. Augur — Charles H. Gerhardt
Frank C. DeLangton — Gustav B. Guenther

Captains

William J. Bradley — Thomas L. Harrold
William S. Conrow — Lyman L. Judge
Alexander George — Frank J. Thompson
Joseph M. Glasgow — Frank G. Trew

First Lieutenants

Thomas W. Chandler — Albert E. Harris
Charles M. Iseley

Second Lieutenants

John W. Dobson — Cecil Himes
Stephen W. Downey, Jr. — Donald W. Thackeray
William H Hale — Marshall Wallach
Charles W. Walson

Twelfth Cavalry (Less Second Squadron), Fort Brown, Texas

Colonel
Arthur E. Wilbourn

Lieutenant Colonels

Jay K. Colwell — Eustis L. Hubbard
Ralph I. Sasse

Majors

Harry A. Buckly — Olin C. Newell
John R. Thornton

Captains

Clarence K. Darling — Henry L. Kinnison, Jr.
Joseph M. Williams

First Lieutenant
McPherson LeMoyne

Second Lieutenants

Arthur W. Allen, Jr. — John B. Nance
Michael S. Davison — James L. Rogers
Samuel M. Hogan — Edward C. D. Scherrer
Alexander D. Surles, Jr.

Twelfth Cavalry (Second Squadron), Fort Ringgold, Texas

Lieutenant Colonel
McFarland Cockrill

Majors

Richard H. Darrell — Herbert L. Jackson

Captains

Charles V. Bromley, Jr. — Frederick W. Drury
John L. Hitchings

Second Lieutenants

Paul W. Scheidecker — John C. F. Tillson, 3d

Fourteenth Cavalry (Less First Squadron), Fort Des Moines, Iowa

Colonel
Arthur H. Wilson

Lieutenant Colonels

Edward J. Dwan — Terrill E. Price
Spencer A. Townsend

Majors

George A. Moore — Vernon L. Padgett

Captains

Charles P. Amazeen — Charles A. Sheldon
Frank O. Dewey — Prentice E. Yeomans

First Lieutenants

David V. Adamson — Donald P. Christensen
Russell V. D. Janzan

Second Lieutenants

Robert E. McMahon — Matthew Whalen

Fourteenth Cavalry (First Squadron), Fort Sheridan, Illinois

Lieutenant Colonel
Charles B. Hazeltine

Majors

Paul H. Morris — Royden Williamson

Captains

Joseph K. Baker — Henry S. Jernigan
Milo H. Matteson

First Lieutenants

William F. Damon — Robert W. Rayburn

Second Lieutenants

Leo G. Carlson — Leland W. Cramer
Walter G. Gleye

Twenty-sixth Cavalry (P. S.), Fort Stotsenburg, P. I.

Colonel
Robert Blaine

Lieutenant Colonels

Walter E. Buchly — James R. Finley

Majors

Lloyd W. Biggs — Donald C. Hawley
Jacob A. Blankenship — John D. Hood
Philip C. Clayton — Carter R. McLennan
Heywood S. Dodd — Frank Nelson
Garnett H. Wilson

Captains

Paul A. Disney — Hugh W. Stevenson
Harold M. Forde — Thomas J. H. Trapnell
James L. Hathaway — Lee C. Vance
Hubert W. Ketchum — Norman M. Winn
John J. LaPpage — Eustaquio S. Bachg (P. S.)
Juan S. Moran (P. S.)

First Lieutenants

James D. Alger — Harry J. Fleeger
Robert E. Arnett, Jr. — Ralph E. Haines, Jr.
William G. Bartlett — Hamilton H. Howze
Robert H. Bayne — Cornelius A. Lichirie
James C. Blanning — John F. Rhoades
William E. Chandler — Charles P. Walker

Second Lieutenants

Joseph R. Barker — Ralph B. Praeger

United States Military Academy, West Point, New York

Lieutenant Colonel
Joseph M. Tully

Captains

J. Paul Breden
Eugene L. Harrison
Loren D. Pegg
Chandler P. Robbins, Jr.
Ronald M. Shaw
William H. Wood

First Lieutenants

Frank H. Britton
John L. Inskeep
George R. Mather
Joseph H. O'Malley
Glenn F. Rogers
Karl L. Scherer
John K. Waters

Students, Cavalry School, Fort Riley, Kansas

Advanced Equitation Course

First Lieutenants

Frederic W. Barnes
F. Clay Bridgewater
James B. Corbett
John W. Darrah, Jr.
John F. Franklin, Jr.
William B. Fraser
Perry B. Griffith
Theodore F. Hurt, Jr.
Harry E. Lardin
John R. Pugh
James W. Snee
Daniel E. Still
Donald O. Vars
William S. Van Nostrand

Regular Course

First Lieutenants

Raymond C. Adkisson
Andrew J. Boyle
Henry T. Cherry, Jr.
Kelso G. Clow
Roy W. Cole, Jr.
John J. Davis
Caesar F. Fiore
Thomas D. Gillis
James E. Glattly
John S. Growdon
Ralph S. Harper
Benjamin W. Heckemeyer
Loren B. Hillsinger
Stephen W. Holderness
Charles J. Hoy
Paul M. Jones
Norman A. Loeb
William V. Martz
Vernon P. Mock
Francis J. Murdoch, Jr.
Ned T. Norris
Bruce Palmer, Jr.
Edward W. Sawyer
Lawrence E. Schlanser
Edgar J. Treacy, Jr.
Shelby F. Williams

Students, The Command and General Staff School, Fort Leavenworth, Kansas

Major
William H. W. Reinburg

Captains

John L. Ballantyne
Raymond M. Barton
Logan C. Berry
Charles P. Bixel
John J. Claybrook, Jr.
Frederic de L. Comfort
Raymond W. Curtis
Cornelis C. Jadwin
Christian Knudsen
Joseph A. Michela
Donald H. Nelson
William H. Nutter
Thomas D. Roberts
John K. Sells
Lawrence G. Smith
John H. Stadler, Jr.
Basil G. Thayer
Thomas T. Thornburgh
Henry R. Westphalinger
William P. Withers

Students, The Army War College, Washington, D. C.

Lieutenant Colonels

Frederick R. Lafferty
Thomas H. Rees, Jr.

Majors

Frank A. Allen, Jr.
Louis LeR. Martin
George I. Smith
Raymond E. S. Williamson

Captains

Clovis E. Byers
Henry I. Hodes
Willard A. Holbrook, Jr.
Verne D. Mudge
Francis P. Tompkins

Students, The Army Industrial College, Washington, D. C.

Majors

James T. Duke
Maurice Rose

Student, The Infantry School, Fort Benning, Georgia

First Lieutenant
William W. Culp

Student, The Signal School, Fort Monmouth, New Jersey

First Lieutenant
Albert B. Turner Jr.

Language Students — Japan

Captains

C. Stanton Babcock
Frank D. Merrill
Eric H. F. Svensson, Jr.

First Lieutenant
Dana W. Johnston, Jr.

Language Students — China

Captain

Edward J. McNally

First Lieutenant
Edwin M. Cahill

Language Student — France

First Lieutenant
Robert W. Fuller, 3d

Duty with the Organized Reserves

Colonels

N. Butler Briscoe, Louisville, Kentucky
Hugh H. Broadhurst, Kansas City, Missouri
Frank K. Chapin, Philadelphia, Pennsylvania
William C. Christy, Chattanooga, Tennessee
George Dillman, San Antonio, Texas
Oscar Foley, Tacoma, Washington
John B. Johnson, Chicago, Illinois
Guy Kent, Boston, Massachusetts
Joseph C. King, Philadelphia, Pennsylvania
Clarence Lininger, New York City
Carl H. Muller, St. Louis, Missouri
Bruce Palmer, Towson, Maryland
Ralph M. Parker, Detroit, Michigan
Emil P. Pierson, New Orleans, Louisiana
Harding Polk, Chicago, Illinois
Selwyn D. Smith, Philadelphia, Pennsylvania
John C. F. Tillson, Jr., Baltimore, Maryland

Lieutenant Colonels

Robert O. Annin, San Francisco, California
Horace T. Aplington, Los Angeles, California
Lucien S. S. Berry, Rutland, Vermont
Arthur B. Conard, Detroit, Michigan
Francis C. V. Crowley, Oklahoma City, Oklahoma
William T. Haldeman, Kansas City, Missouri
Harrison Herman, New Haven, Connecticut
John Kennard, Chicago, Illinois
Arthur T. Lacey, Albany, New York
Thomas F. Limbocker, Detroit, Michigan
John T. Minton, Tuscon, Arizona
Welton M. Modisette, Newark, New Jersey
Edwin O'Connor, New York City
Joseph L. Philips, Washington, D. C.
William G. Simmons, Columbus, Ohio
Herbert E. Taylor, Salt Lake City, Utah
Otto Wagner, Milwaukee, Wisconsin
John P. Wheeler, Richmond, Virginia
Frederic W. Whitney, Oklahoma City, Oklahoma

Majors

Henry T. Allen, Rochester, New York
Frank H. Barnhart, Champaign, Illinois
Charles W. Burkett, St. Louis, Missouri
Lathan H. Collins, Miami, Florida
Roy E. Craig, Omaha, Nebraska
Geoffrey Galwey, New York City
Roye P. Gerfen, Chicago, Illinois
Harold B. Gibson, Nashville, Tennessee
Thomas G. Hanson, Jr., Los Angeles, California
Thomas J. Heavey, Boston, Massachusetts
Fenton S. Jacobs, Denver, Colorado
Catesby apC. Jones, New York City
Kent C. Lambert, New York City
Leslie F. Lawrence, Pittsburgh, Pennsylvania
Paul J. Matte, Knoxville, Tennessee
Cornelius F. O'Keefe, Richmond, Virginia
Milton H. Patton, Charleston, West Virginia
Holmes G. Paullin, Camden, New Jersey
Theodore M. Roemer, Altoona, Pennsylvania
Frederick H. L. Ryder, Du Bois, Pennsylvania
Henry M. Shoemaker, Harlingen, Texas
Curtis L. Stafford, Des Moines, Iowa
James B. Taylor, San Antonio, Texas
Benjamin A. Thomas, Charleston, South Carolina
Thomas D. Wadelton, Indianapolis, Indiana
Robert O. Wright, Norfolk, Virginia

Captains

George G. Elms, Atlanta, Georgia
Ralph T. Garver, Atlanta, Georgia

Duty with the National Guard

Colonels

Joseph A. Baer, Governors Island, New York
Robert M. Cheney, San Antonio, Texas
Guy W. Chipman, Chicago, Illinois
Benjamin O. Davis, New York City
Thomas L. Sherburne, Chicago, Illinois
Howard R. Smalley, Baltimore, Maryland

Lieutenant Colonels

Wilfrid M. Blunt, New York City
Frederic W. Boye, National Guard Bureau, Washington, D. C.
Richard L. Creed, Harrisburg, Pennsylvania
Julian W. Cunningham, Hartford, Connecticut
Mack Garr, Cleveland, Ohio
Wharton G. Ingram, Rochester, New York
Jean D Kelly, Topeka, Kansas
John T. McLane, Chattanooga, Tennessee
Duncan G. Richart, Des Moines, Iowa
Kramer Thomas, Philadelphia, Pennsylvania
John M. Thompson, Dallas, Texas
Arthur H. Truxes, Nashville, Tennessee
Rexford E. Willoughby, Houston, Texas

Majors

Burton C. Andrus, Tyrone, Pennsylvania
Kirk Broaddus, Glasgow, Kentucky
Carlisle B. Cox, Cheyenne, Wyoming
Charles E. Dissinger, National Guard Bureau, Washington, D. C.
Donald R. Dunkle, Cincinnati, Ohio
Charles W. Fake, Douglas, Wyoming

Hugh J. Fitzgerald, Wilwaukee, Wisconsin
Lawrence G. Forsythe, Boston, Massachusetts
Erskine A. Franklin, Springfield, Illinois
Charles F. Houghton, Santa Fe, New Mexico
Dwight Hughes, Jr., Newark, New Jersey
Thomas W. Ligon, New Orleans, Louisiana
Manly F. Meador, Frankfort, Kentucky
Gyles Merrill, Deming, New Mexico
George Millholland, Sunbury, Pennsylvania
Hans C. Minuth, Boise, Idaho
Callie H. Palmer, Savannah, Georgia
Herbert V. Scanlan, Watertown, Wisconsin
Otto Stillinger, Detroit, Michigan
Perry E. Taylor, Fort Worth, Texas
Guy D. Thompson, Burlington, Iowa
Herbert E. Watkins, Brooklyn, New York
Lawrence B. Wyant, Albany, New York

Captains
Clyde B. Bell, Iola, Kansas
Don E. Carleton, Newark, New Jersey

Duty with the R. O. T. C.

Colonels
Frederick D. Griffith, Jr., Michigan State College, East Lansing, Michigan
Herman Kobbe, Los Angeles High Schools, Los Angeles, California
Kerr T. Riggs, University of Georgia, Athens, Georgia

Lieutenant Colonels
George S. Andrew, Norwich University, Northfield, Vermont
Benjamin F. Hoge, Culver Military Academy, Culver, Indiana
Renn Lawrence, Chicago High Schools, Chicago, Illinois
John W. McDonald, University of Illinois, Champaign, Illinois
James G. Monihan, St. Ignatius High School, San Francisco, California
Thomas G. Peyton, University of Arizona, Tucson, Arizona
Richard B. Trimble, University of Georgia, Athens, Georgia

Majors
Frank E. Bertholet, Pasadena Junior College, Pasadena, California
Carleton Burgess, University of Arizona, Tucson, Arizona
Edwin M. Burnett, Texas A. and M. College, College Station, Texas
Harry L. Branson, Pueblo High School, Pueblo, Colorado
Henry H. Cameron, Owensboro High School, Owensboro, Kentucky
Charles R. Chase, Oklahoma Military Academy, Claremore, Oklahoma
George P. Cummings, Polytechnic High School and Junior College, Riverside, California
Alfred J. de Lorimer, University of Illinois, Champaign, Illinois
Frederick F. Duggan, Kansas City High Schools, Kansas City, Missouri
Murray H. Ellis, University of Illinois, Champaign, Illinois
Waldemar A. Falck, University of Arizona, Tucson, Arizona
Claude W. Feagin, Glendale High School, Glendale, California
Glenn S. Finley, Oklahoma Military Academy, Claremore, Oklahoma
Horace W. Forster, Mattoon High School, Mattoon, Illinois
Rossiter H. Garity, University of Illinois, Champaign, Illinois
William R. Hamby, Columbus High Schools, Columbus, Georgia
Stanton Higgins, Johnson City High Schools, Johnson City, Tennessee
Charles A. Horger, Ashland High Schools, Ashland, Kentucky
William R. Irvin, Texas A. and M. College, College Station, Texas
Marcus E. Jones, New Mexico Military Institute, Roswell, New Mexico
Joseph I. Lambert, Chicago High Schools, Chicago, Illinois
John E. Maher, Central Catholic High School, San Antonio, Texas
Gene R. Mauger, Houston High Schools, Houston, Texas
Bertrand Morrow, University of Georgia, Athens, Georgia
Halbert H. Neilson, Nashville High Schools, Nashville, Tennessee
William V. D. Ochs, New Hanover High School, Wilmington, N. C.
John P. Scott, Phoenix High Schools, Phoenix, Arizona
John E. Selby, New Mexico Military Institute, Roswell, New Mexico
Phillip B. Shotwell, Logan High Schools, Logan, Utah
James Van V. Shufelt, University of Georgia, Athens, Georgia
Harold P. Stewart, Massachusetts State College, Amherst, Massachusetts
Benners B. Vail, Montgomery High Schools, Montgomery, Alabama
Russell C. Winchester, University of Arizona, Tucson, Arizona
Melvin S. Williamson, Decatur High Schools, Decatur, Illinois
George D. Wiltshire, Virginia Military Institute, Lexington, Virginia
Donald A. Young, Massachusetts State College, Amherst, Massachusetts

Captains
Wallace H. Barnes, Norwich University, Northfield, Vermont
George W. Busbey, Chicago High Schools, Chicago, Illinois
Augustine D. Dugan, Michigan State College, East Lansing, Michigan
Powhatan M. Morton, Virginia Military Institute, Lexington, Virginia
Clark L. Ruffner, Norwich University, Northfield, Vermont
Albert S. J. Stovall, Jr., University of Illinois, Champaign, Illinois
David A. Taylor, Michigan State College, East Lansing, Michigan
H. Jordan Theis, Massachusetts State College, Amherst, Massachusetts
Arthur N. Willis, Shreveport High School, Shreveport, Louisiana

First Lieutenant
Matthew W. Kane, Western Military Academy, Alton, Illinois

Duty at Corps Area Headquarters

Colonels
George H. Baird, 2nd Corps Area
Harley C. Dagley, 5th Corps Area
Clarence A. Dougherty, 2nd Corps Area
Edward A. Keyes, 8th Corps Area
Henry R. Richmond, 4th Corps Area

Major
Howard A. Boone, 7th Corps Area

Captain
Cary B. Hutchinson

Detailed in the Adjutant General's Department

Major
Winfield C. Scott, Panama Canal Department

Captains
Gordon S. Armes, Fort Sam Houston, Texas
Kenneth G. Hoge, Washington, D. C.
Lawrence E. Schick, Fort Sam Houston, Texas

Detailed in the Quartermaster Corps

Majors
Richard N. Atwell, Holabird, Maryland
Edward H. deSaussure, Front Royal, Virginia
Robert MacD. Graham, Kansas City, Missouri
William L. Hamilton, Philadelphia, Pennsylvania
Ralph E. Ireland, Fort Reno, Oklahoma
John H. Irving, Fort Douglas, Utah
Fred W. Koester, Pleasonton, California
James V. McDowell, Fort Brady, Michigan
Albert E. McIntosh, Philadelphia, Pennsylvania
Lawrence Patterson, Fort Ringgold, Texas
Christopher C. Strawn, Fort Bliss, Texas
Mortimer F. Sullivan, Fort Ethan Allen, Vermont
Morduant V. Turner, Hot Springs, Arkansas
Marion I. Voorhes, Fort Worth, Texas
Andrew J. Wynne, Fort Sill, Oklahoma

Captains
George C. Claussen, Fort Riley, Kansas
Clyde Massey, Fort Thomas, Kentucky
John G. Minniece, Jr., Fort Robinson, Nebraska
Granville V. Morse, Manila, P. I.
Samuel L. Myers, Manila, P. I.
Francis L. Ready, Baltimore, Maryland
Carroll H. Prunty, Fort Reno, Oklahoma
John T. Ward, Fort Winfield Scott, California

First Lieutenants
Maynard D. Pederson, Fort Snelling, Minnesota
Carl D. Womack, Fort Logan, Colorado

Detailed in the Finance Department

Captains
August W. Farwick, Chicago, Illinois
Charles H. Martin, Omaha, Nebraska

Detailed in the Ordnance Department

Captain
Paul W. Shumate, Frankford Arsenal, Pennsylvania

First Lieutenants
Gerard C. Cowan, Aberdeen, Maryland
Angelo R. Del Campo, Jr., Fort Sam Houston, Texas
Edward D. Mohlere, Watertown Arsenal, Massachusetts

Detailed in the Signal Corps

First Lieutenants
Richard M. Bauer, Fort Monmouth, New Jersey
Ewing C. Johnson, Fort Monmouth, New Jersey
Wilfred H. Tetley, Hawaiian Department

Second Lieutenant
Carl L. Lindquist, Fort Monmouth, New Jersey

Detailed in the Inspector General's Department

Colonels
William W. Gordon, Boston, Massachusetts
Charles F. Martin, Washington, D. C.
Troup Miller, Governors Island, New York
Edgar W. Taulbee, Fort Bliss, Texas

Lieutenant Colonels
Robert E. Carmody, Chicago, Illinois
Thomas A. Dobyns, Jr., Panama Canal Department
Frederick Herr, Hawaiian Department
Oliver L. Haines, Fort Sam Houston, Texas
Donald S. Perry, Fort Lewis, Washington
Frank G. Ringland, Fort Sheridan, Illinois
Pearl L. Thomas, Boston, Massachusetts

Major
John O. Lawrence, Manila, P. I.

Duty with Air Corps

First Lieutenants
Howell M. Estes, Jr., Randolph Field, Texas
Jergen B. Olson, Randolph Field, Texas
William R. Prince, Fort Bragg, North Carolina
Carl L. Rickenbaugh, Randolph Field, Texas
Hilwert S. Streeter, Fort Sill, Oklahoma
Jack W. Turner, Randolph Field, Texas

Second Lieutenants
Charles R. Bowers, Santa Maria, California
Vincent L. Boylan, Tuscaloosa, Alabama
Adam K. Breckenridge, Lincoln, Nebraska
Robert W. Crandall, Dallas, Texas
William A. Garnett, Dallas, Texas
James D. Green, Glendall, Californa
Robert D. Hunter, Lincoln, Nebraska
Victor L. Johnson, Jr. Lincoln, Nebraska
William C. Jones, Tulsa, Oklahoma
George Y. Jumper, San Diego, California
Levin L. Lee, Tuscaloosa, Alabama
William L. McDowell, Jr., Dallas, Texas
James E. Mather, Santa Maria, California
Jack G. Merrell, Dallas, Texas
Richard VanW. Negley, Jr, Tuscaloosa, Alabama

William W. Nichols, Lincoln, Nebraska
Lyle E. Peterson, Dallas, Texas
Robert C. Richardson, 3d, Tusla, Oklahoma
Donald M. Simpson, Glenview, Illinois
William L. Turner, Tuscaloosa, Alabama
Thomas B. Whitehouse, Glenview, Illinois
Arthur T. Williams, 3d, Tuscaloosa, Alabama

Detailed in Chemical Warfare Service

First Lieutenant
Charles F. Harrison, Edgewood Arsenal, Maryland

Duty, Panama Canal Department

Colonel
John D. Long

Lieutenant Colonel
Harold Thompson

Major
Clifford A. Eastwood

Duty, Camp Dix, New Jersey

Colonel
Arthur Poillon

Lieutenant Colonel
Lawrence C. Frizzell

Recruiting Duty

Colonels
Charles B. Amory, Jr., Baltimore, Maryland
Stanley Koch, Houston, Texas
Aubrey Lippincott, Los Angeles, California
John C. Pegram, Baltimore, Maryland
Daniel D. Tompkins, Atlanta, Georgia

Lieutenant Colonels
Charles L. Clifford, Jackson, Mississippi
John L. Rice, Boston, Massachusetts
Edward F. Shaifer, Chicago, Illinois

Majors
Harry W. Benson, Brooklyn, New York
Herbert E. Featherstone, Fort Slocum, New York
James I Gibbon, Fort McDowell, California
Samuel R.Goodwin, Fort Slocum, New York
Oscar W. Koch, Fort McDowell, California
Brock Putnam, Hartford, Connecticut
Gilbert Rieman, Fort McDowell, California
Randolph Russell, Brooklyn, New York
Alden H. Seabury, Peoria, Illinois
William R. Stickman, Fort McDowell, California

Captain
Rogers A. Gardner, Fort McDowell, California

Liaison Officers

Lieutenant Colonel
Willard S. Wadelton, Edgewood Arsenal, Maryland

Majors
Francis T. Bonsteel, Philadelphia, Pennsylvania
Hugh G. Culton, Quantico, Virginia

Captain
Dana G. McBride, Fort Monmouth, New Jersey

Miscellaneous Duty

Lieutenant Colonel
Edward L. N. Glass, Instructor, Guatemalan Army, Guatemala

Majors
Walter W. Boon, Commanding Officer Troops, U. S. Army Transport
Alton W. Howard, Commanding Officer Troops, U. S. Army Transport
Edward A. Everitt, Jr., U. S. Disciplinary Barracks, Governors Island, New York
Harry W. Maas, New York Port of Embarkation, Brooklyn, New York
Hal M. Rose, Battle Monuments Commission, Washington, D. C.

Captain
Clifford I. Hunn, U. S. Disciplinary Barracks, Governors Island, N. Y.

Duty with Civilian Conservation Corps

Lieutenant Colonels
Sidney V. Bingham, Baltimore, Maryland
Howell M. Estes, Fort Oglethorpe, Georgia
Henry McE. Pendleton, Baltimore, Maryland
J. Frank Richmond, Fort Bliss, Texas

Majors
Theodore B. Apgar, Fort Lincoln, North Dakota
Truman E. Boudinot, Fort Knox, Kentucky
Malcolm Byrne, Fort Meade, South Dakota
John W. Carroll, Little Rock, Arkansas
Gersum Cronander, Charleston, West Virginia
Paul C. Febiger, Sacramento, California
Wade C. Gatchell, Fort Knox, Kentucky
George A. King, Fort Des Moines, Iowa

Ordered Home to Await Retirement

Colonels
William W. Edwards
Francis W. Glover

Majors
Henry H. Cheshire
Harvey N. Christman

Captain
William A. Bugher

Duty at West Point, New York

Second Lieutenant
John C. Habecker

Notes from the Cavalry Board

(Continued from page 519)

his gas mask, but in the meantime his mount and his led horse are breathing as usual. How much damage has been done to the horses before the soldier can fit each in turn with a mask? Or how much can led horses that are left mobile or immobile be cared for in this respect? Under what circumstances and in what situation do cavalrymen put gas masks on their horses preparatory to a mounted attack? Or must we avoid chemical attack whenever we can—and take our losses whenever we can't? These are but some of the aspects of the problem. Being without historical example we must rely upon conjecture, imagination and common sense. The Cavalry Board takes this means to urge upon all cavalrymen and other interested individuals to give the subject their serious thought and give the board the benefit of their ideas and experiences. It is suggested that in map problems and terrain exercises effort be made to conceive situations that might throw light upon this subject.

Other current projects before the board are: Preparation of Basic Field Manuals for the Caliber .50 HB, M2, Machine Gun, Ground Course, Caliber .30, M1919A4 Machine Gun, Ground Course, and the Pistol, Caliber .45, M1911; the 81-mm. Mortar Pack; Small Arms Armament for Scout Cars and Motorcycles; Small Bore Practice in Caliber .50 Machine Gun Training; Pull-type Selective Single Shot Auto-Fire Trigger Mechanism for Browning Machine Gun, Caliber .50, M2, HB; Anti-aircraft Mount and raised Mount for Light Machine Gun and raised Mount for Caliber .50 Machine Gun; New Type Magazines for Automatic Pistol, Caliber .45, M1911; Command Post Car; Bullet-seal and Sealed Air Tubes; Canvas Watering Tanks; Cellulose Sponges; Legging Top Boots; Service Gas Mask Facepiece; Diaphram Gas Mask Facepiece; Scabbards for Thompson Submachine Gun; Experimental Pistol Rack; Stereoscopes; Sun Glasses; General Revision of Tables of Organization; The Required Number of Radio Channels for Cavalry; Strip film for ROTC.

CAVALRY JOURNAL INDEX

Volume XLVIII, 1939

Authors

A

Agrippa, II 200, 363

B

Benitez, Major E. M. 12

C

Chandler, Lieutenant W. C. 68
Conner, Major L. B. 247
Culp, Lieutenant W. W. 318
Chaffee, Brigadier General Adna R. 450

D

Dorfman, Captain S. S. 503

E

Eastwood, Major H. E. 321
Eliot, Geo. F. 194
Ely, Major General H. E. 354

G

Gault, Lieutenant Colonel P. F. 294
Grow, Lieutenant Colonel R. W. 204

H

Hargreaves, Major R. 274
Hawkins, Brigadier General H. S.
77, 154, 171, 255, 236, 424, 516
Heavey, Major T. J. 461
Herr, Major General J. K. 3

J

Jacobs, Major F. S. 136
Johnson, Major C. R. 162

K

Keller, Sergeant K. F. 64
Kellett, R. G. 316
Kester, Captain W. O. 249
Kyne, Peter B. 31, 121, 233, 372

L

Lackey, Captain C. M. 416
Lanza, Colonel C. H. 392

M

Marochetti, Captain the Baron G. 7
Martin, Captain P. M. 57, 159, 246
Merrill, Major G. 414

N

Nye, Lieutenant Colonel E. 164

O

Ochtman, Arthur F. 477

P

Palmer, Lieutenant B., Jr. 410
Pendleton, Lieutenant Colonel H. McE. 328
Perry, Major R. F. 99
Phillips, Colonel A. E. 148
Phillips, Major T. R. 210
Porter, Lieutenant R. W., Jr. 242
Pratt, Fletcher 377, 482

R

Reardon, Master Sergeant J. J. 329
Reilly, Brigadier General H. J. 281
Riordan, Lieutenant F. H., Jr. 313, 414
Roffe, Lieutenant Colonel A. W. 417

S

Sears, Captain H. A. 284
Scott, Brigadier General E. D. 18
Schwien, Lieutenant Colonel E. E. 104, 464
Smith, Captain C. N. 406
Smith, Lieutenant Colonel Truman 475
Stewart, Colonel H. S. 399

W

Wadelton, T. D., Jr. 52
Wedel, von, Lt. Col. (German Army) 469
Wilcox, Chaplain E. B. 222
Wilmeth, Lieutenant J. D. 161, 326
Wilson, Major V. 41
Wood, Colonel J. S. 208

Y

Yale, Captain W. W. 139

Titles

A

Accompanying Aircraft, *Kellett* 316
Activities, Organization 87, 179, 252, 342, 433, 524
Activities, Special 57, 159, 246, 326, 410, 503
Adoption and Supply of New Equipment, *Reardon* ... 329
Antitank Gun, The New 66
At the Cavalry School 173

B

Book Reviews 83, 176, 258, 339, 430, 520
Borium, Marching On, *Knight* 65

C

Caloric Measure of a Man, The, *Wilmeth* 326
Cannae: The Perfect Battle, *Wilcox* 222
Cavalry Affairs Before Congress 130
Cavalry Dispersion, (*Photo*) 495
Cavalry Episode, A, *Jacobs* 136
Cavalry Division Maneuvers, October, 1939, *Schwien*.. 464
Cavalry Operations in Spain, *Benitez* 12
Cavalry Participation in First Army Maneuvers,
Manassas Phase 429
Cavalry, Porte, *Chandler* 68
Cavalry School, At the 173
Cavalry Shock Tactics, *Stewart* 399
Cavalry, The Future of American, *Eliot* 194
Cavalry, Value on the Border, *Keller* 64
Combined Cavalry Maneuvers, *Wilson* 41
Corps Reconnaissance Regiment, (*Charts*) 498
Crazy Business, *Kyne* 31, 121, 233

D

Diesel Engine, The, *Ochtman* 477
Dress Rehearsal for the Next World War, *Hargreaves*. 274
Defense, Horses for 306

E

Editorial, Special 500
Editor, Letters to the 74, 166, 419, 510
Editor's Saddle 72, 168, 252, 332, 420, 512
Efficient Rifle Troop, An, *Conner* 247

F

False Lessons in Combat and Musketry Exercises, *Hawkins* 154
First Cavalry Wins Pistol Shoot, *Martin* 159
Fourth Cavalry and Equine Encephalomyelitis, *Nye* ... 164
Fox Hunt and Some Other Things, A, *Wadelton* 52
Foxhunter Views the Olympic Try-Out, A 504
Future of American Cavalry, The, *Eliot* 194

G

German Campaign in Poland, *von Wedel* 469
Glory of the Soldier, The, *Phillips* 210

H

Hawkins, General, Notes 77, 171, 255, 336, 424, 516
Hearing Officers Think 506
Horses for Defense 306
Horses in Japan 290
Horseshow Terms, *Roffe* 417

L

Letters to the Editor 74, 166, 419, 510
Little Phil, *Pratt* 377, 482

M

Maneuvers and the Umpire System, *Wood* 208
Maneuvers Reveal Deficiencies 390
Marching on Borium, *Knight* 65
March Schedules Simplified, *Merrill* 414
May I Say a Word for the Horse? 146
Mechanized Night Ride, *Riordan* 313
Military Aspects of Sudeten Crisis, *Lanza* 392
Mobility—Fire Power and Shock, *Sears* 284
Modern Seat, The, *Culp* 318
More Anent this Shooting Business, *Martin* 246
Moulding Men for Battle, *Ely* 354
Moving Stalled Vehicles and Crossing Difficult Terrain, *Porter* 242

N

Neglected Mobility, *Schwien* 104
New Antitank Gun, The 66
New Developments in the Organization and Equipment of Cavalry, *Grow* 204
Nine Troop Regiment, The, (*Chart*) 496
Notes, General Hawkins 77, 171, 255, 336, 424, 516
Notes from the Cavalry Board, 81, 174, 256, 338, 428, 519
Notes from the Chief of Cavalry, 75, 169, 254, 334, 422, 514
Notes on the M-1 Rifle, *Wilmeth* 161

O

Observer at the First Army Maneuvers, *Heavey* 461
Official Executioner, *Kyne* 372
Operations of a German Armored Car Platoon in Poland, *Smith* 475
Organization Activities 87, 179, 262, 342, 433, 524

P

Phillips, Military Saddle, The, *Phillips* 148
Poland Between Two Camps 366
Porte Cavalry, *Chandler* 68
Promotion—A Study of Vitalization 200

Q

Questions and Answers on Modern Cavalry, *Pendleton* 328

R

Reflections on Famous Rides, *Kester* 249
Reserves Take Command at Fort Bliss, *Smith* 406
Revised Tables of Organization 152
Revised Tables of Organization Cavalry Regiment, Horse 58
Russian Cavalry 481
Roster of Regular Army Cavalry Officers 537

S

Saddle, Phillips Military, The, *Phillips* 148
Seventh Cavalry Brigade in First Army Maneuvers, *Chaffee* 450
Sidelights on Organization, *Yale* 139
Special Activities 57, 159, 246, 326, 410, 503
Staff and Combat Leadership, *Agrippa, II* 363
Streamlined Training, *Lackey* 416
Supply of a Mechanized Cavalry Brigade on a March, *Perry* 99

T

Tank Attack in Spain, *Reilly* 281
Target Range Trailer, A, *Johnson* 162
Third Cavalry Wins Rifle Shoot, *Martin* 159
Time to Wake Up 507
Tragic Wartime Convoy, A, *Gault* 294
Training of Modern Cavalry for War 298
Training Over Their Heads, *Dorfman* 503

V

Value of Cavalry on the Border, *Keller* 64

W

War Paint for Modern Fighters, *Riordan* 414
What Does Palestine Prove? *Marochetti* 7
What of the Future? *Herr* 3
What's New in Marching? *Eastwood* 321
Wounded Knee: A Look at the Record, *Scott* 18